



427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1197

1190200002--M...  
Olin Corporation (S...)  
ILD006271696  
Subject F

USEPA V

February 7, 1994

CERTIFIED MAIL

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P. O. Box 19276  
Springfield, IL 62794-9276

RECEIVED MAR 28 1994  
WMD RCRA  
RECORD CENTER

US EPA RECORDS CENTER REGION 5



1002162

Re: Zone 6 Interim Status Groundwater  
Quality Assessment Plan Report  
Fourth Quarter 1993

RECEIVED

FEB - 9 1994

PERMIT SECTION

Dear Mr. Eastep:

Enclosed please find three (3) copies of the fourth quarter 1993, Zone 6 Interim Status Groundwater Quality Assessment Report.

Analysis of organics found chloroform in the rinsate blank at a concentration of 49 ppb. The MCL for this constituent is 100 ppb. Chloroform was not detected in any of the monitoring wells.

Methylene chloride was detected in two of the eight monitoring wells and was also detected in the rinsate blank and the field blank. Concentrations ranged from 6.1 ppb to 6.4 ppb in the monitoring wells, 9.8 ppb in the rinsate blank and 140 ppb in the field blank. The presence of methylene chloride is believed to be a laboratory artifact and not representative of groundwater quality.

Acetone was detected in the rinsate blank at a concentration of 490 ppb. Since acetone was detected only in the rinsate blank and was used as part of the decontamination procedure, its presence is not believed to be representative of groundwater quality.

Zinc was detected in one monitoring well at a concentration of 36 ppb. This concentration was above the PQL of 20 ppb for zinc, but below the MCL of 5000 ppb.

Chromium was detected in one monitoring well at a concentration of 13 ppb. This concentration was above the PQL of 10 ppb for chromium, but below the MCL of 50 ppb.



427 North Shamrock Street • East Alton, IL 62024-1174 • Phone: (618) 258-2000 • FAX: (618) 258-3084

November 30, 1993

CERTIFIED MAIL

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P. O. Box 19276  
Springfield, IL 62794-9276

RECEIVED

DEC - 3 1993

IEPA - DUL  
PERMIT SECTION

Re: Zone 6 Interim Status Groundwater  
Quality Assessment Plan (ISGWQAP) Report  
Third Quarter 1993

Dear Mr. Eastep:

Enclosed please find three (3) copies of the third quarter 1993, Zone 6 Interim Status Groundwater Quality Assessment Report.

Analysis of organics found chloroform in a rinsate blank at a concentration of 35 ppb. The MCL for this constituent is 100 ppb. Chloroform was not detected in any of the monitoring wells.

Methylene chloride was detected in six of the eight monitoring wells and was also detected at similar concentrations in the duplicate and rinsate blank. Concentrations ranged from 5 ppb to 13 ppb. The presence of methylene chloride is believed to be a laboratory artifact and not representative of groundwater quality.

Zinc was detected in six of the eight monitoring wells and the duplicate sample at concentrations in the range of 23 ppb to 34 ppb. These concentrations were above the MDL of 20 ppb for zinc, but below the MCL of 5000 ppb.

No other organic or inorganic constituents of concern were detected. Therefore, no further action is believed to be required under the Zone 6 ISGWQAP. If you have any questions, please call R. E. Mooshegian at (618) 258-5050.

Very Truly Yours,

M. F. Redington, Manager <sup>REM 11-30-93</sup>  
Utilities & Environmental Services



427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

August 6, 1993

1190200002 -- Madisc  
Olin Corporation - Main Pl  
1LD006271696  
Subpart F

CERTIFIED MAIL

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P. O. Box 19276  
Springfield, IL 62794-9276

Re: Zone 6 Interim Status Groundwater  
Quality Assessment Plan (ISGWQAP) Report  
Second Quarter 1993

Dear Mr. Eastep:

Enclosed please find three (3) copies of the second quarter 1993, Zone 6 Interim Status Groundwater Quality Assessment Report.

Analysis for organics found chloroform in OMW-114 at a concentration of 5 ppb. This concentration is equal to the MDL (5 ppb) for chloroform and below the MCL of 100 ppb.

Tetrachloroethene was detected in three wells during this sampling event. The PQL for tetrachloroethene is 5 ppb. The samples from Wells OMW-110 and OMW-112 contained tetrachloroethene concentrations of 4 ppb and 3 ppb, respectively. The sample collected from well OMW-103R contained a tetrachloroethene concentration of 5 ppb. Since the samples did not exceed the PQL or the MCL, no further action is required at this time.

Methylene chloride was detected in all the wells but was also found at similar concentrations in the quality control blanks. Therefore, the presence of methylene chloride is considered to be a laboratory artifact, and not representative of groundwater quality.

Zinc was detected in the duplicate samples for Wells OMW-103R and OMW-106 at concentrations of 39 ppb and 21 ppb, respectively. Zinc was also detected in Field Blank No. 1 at a concentration of 32 ppb. These concentrations were above the MDL of 20 ppb for Zinc, but below the MCL of 5000 ppb.

No other organic or inorganic constituents of concern were detected and none exceeded an MCL parameter. Therefore, no further action is believed to be required under the Zone 6 ISGWQAP. If you have any questions, please call R. E. Mooshegian at (618) 258-5050.

Very truly yours,

RECEIVED

AUG 12 1993

IEPA - DOE  
PERMIT SECTION

M. F. Redington, Manager  
Utilities & Environmental Services

Enclosures

ek:z6grdwtr.mfr REM  
8/6/93

O L I N C O R P O R A T I O N



427 North Shamrock Street • East Alton, IL 62024-1174 • Phone: (618) 258-2000 • FAX: (618) 258-3084

January 12, 1993

**CERTIFIED MAIL**

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P.O. Box 19276  
Springfield, IL 62794-9276

Re: Zone 6 Interim Status Groundwater  
Quality Assessment Plan (ISGWQAP) Report  
Fourth Quarter 1992

Dear Mr. Eastep:

Enclosed please find three (3) copies of the fourth quarter 1992, Zone 6 Interim Status Groundwater Quality Assessment Report.

Analysis for organics found chloroform in OMW-114 at a concentration of 11 ppb. This concentration is above the MDL of 5 ppb for chloroform but below the MCL of 100 ppb. Rate-and-extent calculations were performed as required and are detailed in the report.

Analysis for inorganics found nickel in OMW-114 at a concentration of 68 ppb. This concentration is above the MDL of 40 ppb for nickel but below the MCL of 100 ppb. Rate-and-extent calculations were performed as required and are detailed in the report.

Methylene chloride was detected in all the wells but was also found at similar concentrations in the quality control blanks. Therefore, the presence of methylene chloride is considered to be a laboratory artifact, and not representative of groundwater quality.

No other organic or inorganic constituents of concern were detected and none exceeded an MCL parameter. Therefore, no further action is believed to be required under the Zone 6 ISGWQAP.

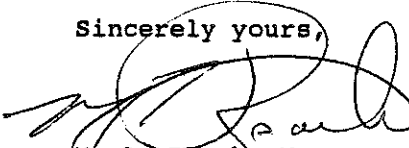
If you have any questions, please call L. W. Pattan at (618) 258-5728.


RECEIVED

JAN 13 1993

IEPA-DLPC

Sincerely yours,

  
M. L. Roark, Manager  
Environmental Affairs

  
1/12/93  
z6grdwtr.lwp





427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

June 10, 1992

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P.O. Box 19276  
Springfield, IL 62794-9276

Region IV  
**RECEIVED**  
JUN 29 1992

OFFICE OF RCRA  
Waste Management Division  
U.S. EPA, REGION V

Re: Zone 6 Interim Status Groundwater  
Quality Assessment Plan (ISGWQAP) Report  
First Quarter 1992

Dear Mr. Eastep:

Enclosed please find three (3) copies of the March, 1992 Zone 6 Interim Status Groundwater Quality Assessment Report.

As detailed in the report, no inorganic constituents of concern were found in statistically-significant concentrations.

Methylene Chloride was detected in the quality control blanks, and, in equal or lesser concentrations, in the two upgradient wells, OMW-105 and OMW-106, as well as in three downgradient wells OMW-109, OMW-113, and OMW-114. Therefore, the presence of methylene chloride in the downgradient wells is considered to be a laboratory artifact, and not representative of groundwater quality.

Chloroform was determined to be present in OMW-104 and OMW-109, at levels exceeding the detection limit. Chloroform was found in two quality control samples at similar concentrations. Therefore, Olin believes the presence of chloroform in OMW-104 and OMW-109 to be an artifact and not indicative of groundwater quality. The concentration of chloroform present in OMW-114 (104 ppb) apparently exceeded the MCL for trihalomethanes. In accordance with the requirements of the ISGWQAP, Olin resampled OMW-114 for chloroform on April 13, 1992. The result from this analysis (80ppb) was below the MCL for trihalomethanes. Considered along with the chloroform concentrations found in two quality control blanks in the first round of sampling, Olin believes an exceedance of the MCL for trihalomethanes did not occur during this sampling event. Rate-and-extent calculations were performed as required and are detailed in the report.

No organic constituents exceeded the MCL with confirmatory analytical results for that parameter, including chloroform. Therefore, no further action is required under the terms of our ISGWQAP.

If you have any questions, please call M. G. Scott at 618-258-5712.

Sincerely yours,

*L. W. Maxson*

L. W. Maxson, Director  
Energy & Environmental Services

**RECEIVED**  
JUN 11 1992  
IEPA-DLPC

MGS/vlp:060992.1tr  
1/19/92

MAY 6 1992

HRP-8J

L.W. Maxson, Director  
Energy and Environmental Services  
Olin Corporation, Main Plant Facility  
427 North Shamrock Street  
East Alton, Illinois 62024-1174

Re: Supplemental Assessment Reports--  
Revised Schedule  
Olin Corporation, Main Plant  
ILD 006 271 696

Dear Mr. Maxson:

The United States Environmental Protection Agency (U.S. EPA) hereby approves your request to submit supplemental assessment reports for the solid waste management units identified in the Federal portion of the Resource Conservation and Recovery Act (RCRA) permit for Olin as Ballistics Sand Waste Piles, in accordance with the schedule proposed in your letter of May 1, 1992. Based on this schedule, Olin will submit to the U.S. EPA the equivalent of a RCRA Facility Investigation (RFI) report on the Ballistics Sand Waste Piles at the time of submittal of the Draft Phase II RFI report. In addition, Olin will submit a preliminary report on these units at the same time as, and as part of, the Draft Phase I RFI Report, which will include a description of the remediation or investigative work that needs to be done prior to completion of the closure/post-closure activities at the units.

Our approval of your request is consistent with Section III.A.2. of the permit, which requires Olin to submit a supplemental assessment report for the Ballistics Sand Waste Piles "...within 120 days of issuance of this permit, or within such later time as approved by the Regional Administrator." We also agree with Olin's opinion that, based on the current status of the State-approved closure activities and post-closure plans for these units, "...it will be impossible for Olin to submit a supplemental report for these units, in the form required by the permit, within 120 days of issuance of the permit."

Please contact Juana Rojo of my staff, at (312) 886-0990, if you have any questions regarding this matter.

Sincerely,

ORIGINAL SIGNED BY/  
KARL BREMER

Karl E. Bremer, Chief  
RCRA Permitting Branch

cc: Lawrence Eastep, IEPA  
Nancy-Ellen Zusman, ORC

LL 5/5/92

RCRA PERMITS	ENV.	AUTH.	IL CHIEF	IN. CHIEF	ML CHIEF	MINN. CHIEF	OH. CHIEF	RRB CHIEF	C.R. A.D.D.	NO.
INFO DATE	JER 5/5/92	JER 5/5/92	<i>[Signature]</i> 5/5/92					<i>[Signature]</i> 5/5/92		



427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

February 10, 1992

CC: Fos-Manion  
Region IV

orig to GDS  
RECEIVED

FEB 19 1992

OFFICE OF RCRA  
Waste Management Division  
U.S. EPA, REGION V

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P.O. Box 19276  
Springfield, IL 62794-9276

Re: Zone 6 Interim Status Groundwater  
Quality Assessment Plan (ISGWQAP) Report  
Fourth Quarter 1991

Dear Mr. Eastep:

Enclosed please find three (3) copies of the December, 1991 Zone 6 Interim Status Groundwater Quality Assessment Report.

As detailed in the report, no inorganic constituents of concern were found in statistically-significant concentrations. Chloroform was found in OMW-114 in a statistically significant concentration. Rate-and-extent calculations were performed as required and are detailed in the report. Methylene chloride was detected in both an up gradient and down gradient wells, as well as the quality control blanks, at similar levels of contamination. Therefore, the presence of methylene chloride in the down gradient wells is considered to be a laboratory artifact, and not representative of groundwater quality. No organic constituents exceeded the MCL for that parameter, including chloroform. Therefore, no further action is required under the terms of our ISGWQAP.

If you have any questions, please call M. G. Scott at 618-258-5712.

Sincerely yours,

L. W. Maxson, Director  
Energy & Environmental Services

MGS/vlp:100991.1tr

LM 2/19/92

RECEIVED

FEB 11 1992

IEPA-DLPC

91





427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

January 31, 1992

*cc: FOS  
Region V  
orig to GAS*

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P.O. Box 19276  
Springfield, IL 62794-9276

RECEIVED  
WMD RCRA  
RECORD CENTER

DEC 04 1992

Re: Correction to Zone 6 Interim Status Groundwater  
Quality Assessment Plan (ISGWQAP) Report  
Third Quarter 1991

*ILD 006 271 696*

Dear Mr. Eastep:

In reviewing this report, we noted that the plume for Chloroform rate-and-extent determination for OMW-114 was plotted inaccurately.

In Part 2 of the report, the plume is shown as bulb-shaped and very wide. The correct shape for the plume is thin and elliptical. The inaccuracy was due to a scale change when plotting the width. The length of the plume in the downgradient direction does not change. To correct this report, attached you will find 3 sheets to replace the inaccurate Plate 2. We apologize for any inconvenience this may cause.

If you have any questions, please call M. G. Scott at 618-258-5712.

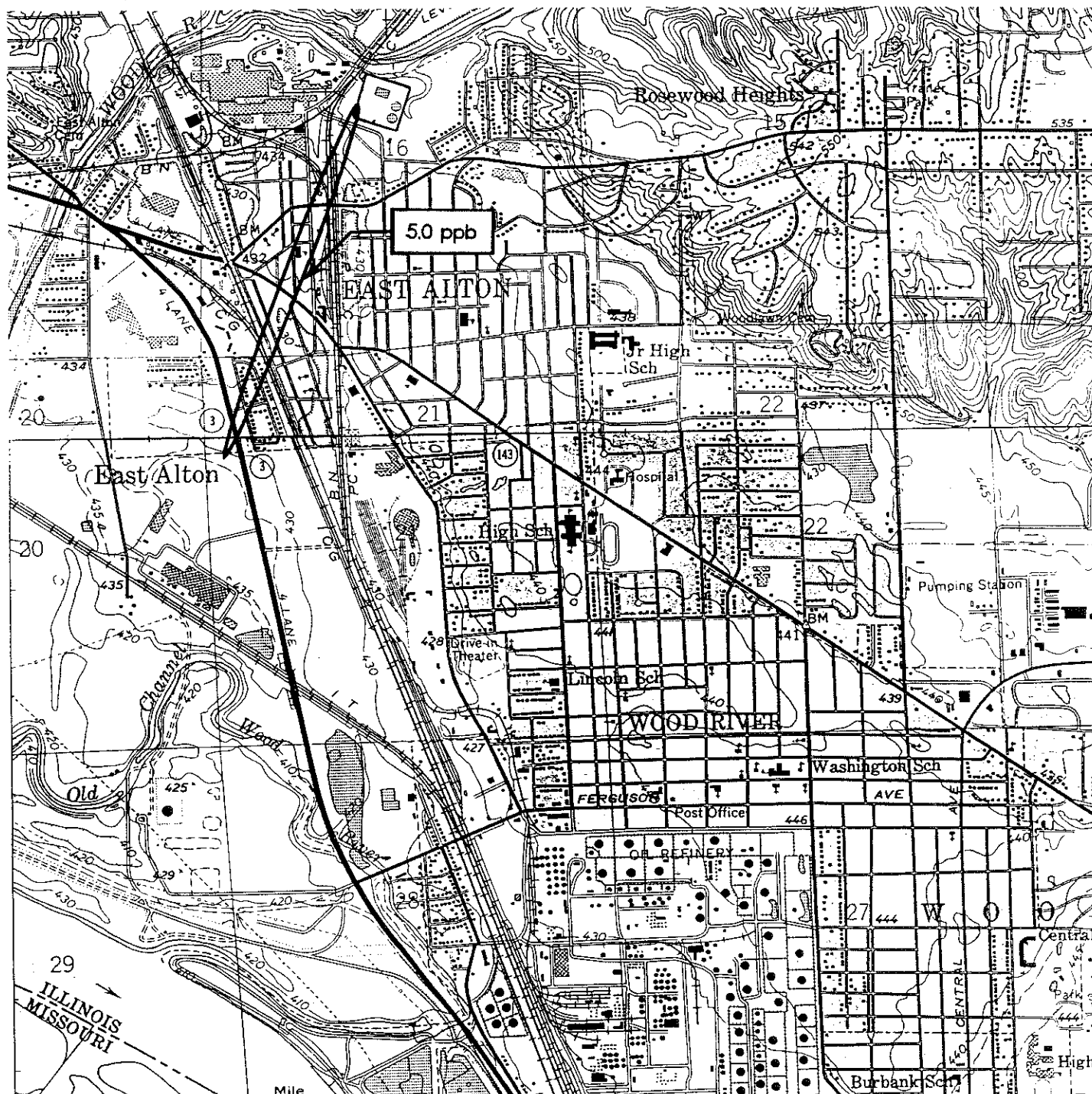
Sincerely yours,

L. W. Maxson, Director  
Energy & Environmental Services

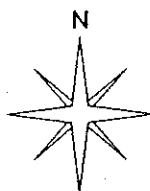
MGS/vlp:013092a.1tr

*WMS  
1/30/92*

RECEIVED  
FEB 05 1992  
IEPA-DLPC



Source:  
Wood River, Ill. and Bethalto, Ill. Quadrangles  
U S Geological Survey  
Photorevised 1974  
Contour Interval = 10 ft



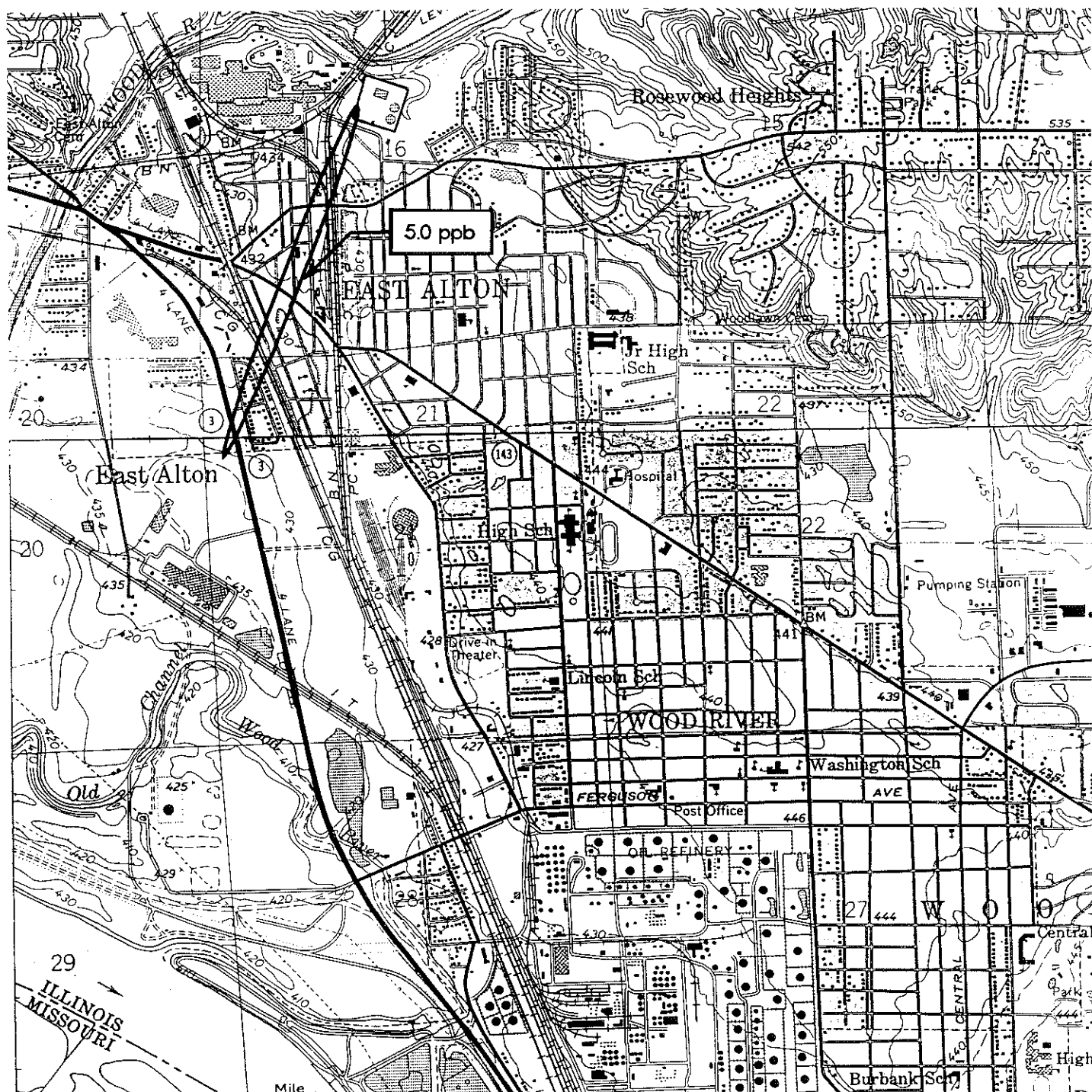
0 2000 ft  
Scale in feet

CALCULATED EXTENT OF CHLOROFORM PLUME

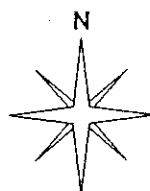
RECEIVED

FEB 05 1992

EPA-DLPC

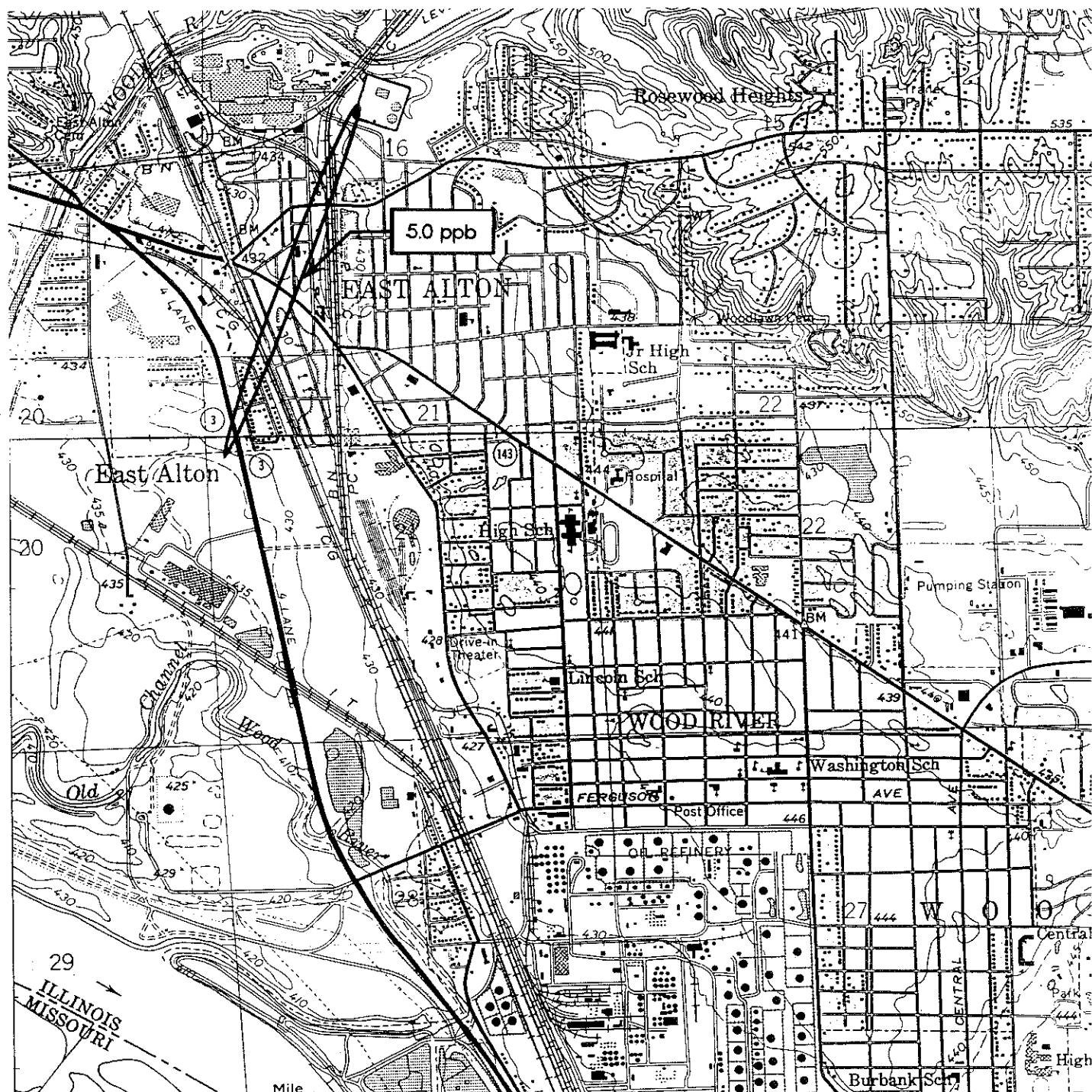


Source:  
Wood River, Ill. and Bethalto, Ill. Quadrangles  
U S Geological Survey  
Photorevised 1974  
Contour Interval = 10 ft

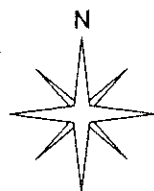


0 2000 ft  
Scale in feet

CALCULATED EXTENT OF CHLOROFORM PLUME



Source:  
Wood River, Ill. and Bethalto, Ill. Quadrangles  
U S Geological Survey  
Photorevised 1974  
Contour Interval = 10 ft



0 2000 ft  
Scale in feet

## CALCULATED EXTENT OF CHLOROFORM PLUME





427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

December 16, 1991

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P.O. Box 19276  
Springfield, IL 62794-9276

RECEIVED

DEC 17 1991

IEPA-DLPC

*1190200002 - Madison Co.*  
Re: Zone 6 Interim Status Groundwater  
Quality Assessment Plan (ISGWQAP) Report  
Third Quarter 1991 *ILD006271696*  
*SUBPART F*

Dear Mr. Eastep:

Enclosed please find three (3) copies of the September, 1991 Zone 6 Interim Status Groundwater Quality Assessment Report.

As detailed in the report, no inorganic constituents of concern were found in statistically-significant concentrations. Chloroform was found in OMW-114 in a statistically significant concentration. Rate-and-extent calculations were performed as required and are detailed in the report. No organic constituents exceeded the MCL for that parameter, including Chloroform. Therefore, no further action is required under the terms of our ISGWQAP.

If you have any questions, please call M. G. Scott at 618-258-5712.

Sincerely yours,

L. W. Maxson, Director  
Energy & Environmental Services

*12/13/91*  
*MGS*

MGS/vlp:100991.1tr



427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

June 21, 1991

*Copy to USEPA  
copy to DLPC*

**CERTIFIED MAIL**

Mr. L. W. Eastep, P.E., Manager  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
Permit Section  
P O Box 19276  
Springfield, IL 62794-9276

*1190200002 - Madison Co  
Olin Corp.  
FLD 006 271696  
Subpart F*

Re: Zone 6 Lagoon Interim Status  
Groundwater Quality Assessment Report  
1st Quarter, 1991 Report

Dear Mr. Eastep:

Attached please find three (3) copies of the March, 1991 Zone 6 Lagoon Interim Status Groundwater Quality Assessment Report (ISGQA Report).

As detailed in the report, lead was found in OMW-110 in a statistically-significant concentration. Rate and dispersion are defined, as requested, in the report. OMW-113 contained zinc in a statistically-significant concentration. Rate and extent calculations for zinc are contained in the attached report.

Tetrachloroethane was found above the MDL at OMW 110 and OMW-103. Rate and extent are defined in the attached report. This compound has no MCL.

If you have any further questions, please contact Mike Roark at (618) 258-5039.

Very truly yours,

L. W. Maxson, Director,  
Energy & Environmental Services

MGS/alm:1qtrrpt.z61  
Attachments

RECEIVED

JUN 25 1991

IEPA-DLPC



427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174  
February 18, 1991

FEDERAL EXPRESS

Mr. Lawrence W. Eastep, P.E., Manager  
Permit Section  
Division of Land Pollution Control  
Illinois Department of Environmental Protection  
P.O. Box 19276  
Springfield, IL. 62794-9276

Re: 1190200002 -- Madison County  
Olin Corporation  
ILD006271696  
Subpart F

Dear Mr. Eastep:

Enclosed please find three copies of the September, 1990 Groundwater Quality Assessment Report. The chloroform MDL was exceeded in OMW 114. The MDL for tetrachloroethene was exceeded in OMW 110. In accordance with the Interim Status Groundwater Quality Assessment Plan, the rate and extent were calculated for both organics, and it was predicted that no migration off site of organics at levels above the MDL would occur based on the detection of these two parameters.

In well OMW 109, lead was detected in a statistically significant concentration. Once again, the rate and extent calculation predicts that, from the results of this analysis, no migration of lead offsite in concentrations significantly above background will occur. In wells OMW 112 and OMW 114, cyanide was detected in statistically significant concentrations. Well OMW 112 was determined to contain a concentration of cyanide less than the MCL for general use ground water. OMW 114, on the other hand, contained a concentration of CN over the MCL for general use ground water. Olin believes the CN concentrations detected at wells OMW 112 and OMW 114 were the result of a reported spill incident in March of 1990. This incident is described below.

On March 13, 1990, an elbow in the line leading from the copper plating facility to the Winchester WWTF broke and cyanide-containing wastewater was spilled. Olin's report of the spill estimated that the pipe had been broken for an hour, and that approximately 1200 gallons of cyanide-containing wastewater had leaked. Olin repaired the leak and remediated the leak site by excavating approximately sixty (60) cubic yards of contaminated soil. As indicated in Table 1, cleanup criteria were met for the site.

Table 1

Parameter	Cleanup Criteria	Final Soil Level
Cd	0.05 ppm EP	0.011 mg/L EP
Cr+6	0.05 ppm EP	0.005 mg/L EP
Ni	1.0 ppm EP	0.1 mg/L EP
Pb	0.1 ppm EP	0.005 mg/L EP
CN(tot)	25 ug/g	0.1 ug/g

RECEIVED

FEB 19 1991

IEPA-DLPC

Olin is confident that the spill is the source of the cyanide in well number OMW 114. This conclusion is supported by the fact that CN was undetected in any of the downgradient wells closer to the Zone 6 Lagoon. In addition, at an estimated migration rate of 405 feet per year, the location of well OMW 114 would be the expected location of CN after six months from a spill at the broken elbow.

As required in the Interim Status Groundwater Quality Assessment Plan, Olin tasked its consultant to determine rate and extent of the CN from the location of well OMW 114. The modeling information attached indicates that the CN in the groundwater will be dissipated to below the MCL within 223 feet at a groundwater flow rate of 405 feet per year.

The Interim Status Groundwater Quality Assessment Plan requires that a release from the Zone 6 Lagoon be managed by the implementation of the Contingent Corrective Measures Plan after the receipt of the results of the confirmation sampling. In this case, the September data were received close to the time that the December sampling was scheduled. Therefore, Olin is using the December data as the confirmation sampling. The December data indicate that the CN level at well OMW 114 is 19 ppb, which is below the MCL for CN, and which reinforces Olin's conclusion that the CN in the ground water has dissipated, and will continue to do so. The December, 1990 Groundwater Quality Assessment Report is in preparation and will be submitted soon. Because this is not a release from the Zone 6 Lagoon, and the confirmation sample was below the MCL, the formal Contingent Corrective Measures Plan was not required to be implemented.

If you have any questions, please do not hesitate to contact Mike Roark of my staff at (618) 258-5039.

Sincerely yours,



L. W. Maxson, Director  
Environmental Services

wp:septltr



427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

1190200002 - Madison Co.

Olin Corp.

ILD006271696

Subpart F

June 22, 1990

GDS

CERTIFIED MAIL

Illinois Environmental Protection Agency  
2200 Churchill Road  
P. O. Box 19276  
Springfield, Illinois 62794-9276

Attention: Lawrence W. Eastep, P. E.  
Manager, Permit Section  
Division of Land Pollution Control

Subject: Interim Status Groundwater Quality Assessment Plan  
Revisions and Contingent Corrective Measures Plan  
for Olin's Zone 6 Emergency Holding Lagoon

Dear Mr. Eastep:

On February 21, 1990 Olin submitted the subject plans to the IEPA for approval. The Agency responded by letter dated February 28, 1990 from Angela Aye Tin to L. W. Maxson with comments on the Groundwater Quality Assessment Plan and partial comments on the Contingent Corrective Measures Plan. Final comments on the Contingent Corrective Measures Plan were provided by the Agency in a letter dated May 9, 1990 from Mr. Lawrence Eastep to L. W. Maxson. The purpose of this submittal is to provide copies of the subject Plans which have been revised to incorporate the Agency's comments.

Interim Status Groundwater Quality Assessment Plan

The Agency's letter dated February 28, 1990 was very helpful in providing an understanding of the groundwater monitoring requirements as Olin makes the transition from Interim Status to Permitted Status and providing options for dealing with the transition. The Interim Status Groundwater Quality Assessment Plan submitted herewith has been revised to incorporate the Agency's comments and suggestions. A schedule of implementation is included in the revised plan.

Contingent Corrective Measures Plan

The Contingent Corrective Measures Plan submitted herewith incorporates the comments contained in the Agency's February 28, 1990 letter.

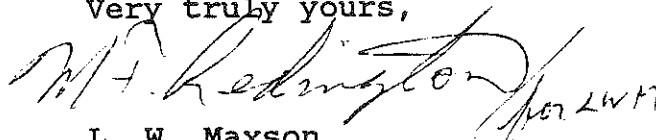
JUN 25 1990

IEPA-DLPC

The Agency's May 9 letter contained five (5) comments regarding Olin's Contingent Corrective Measures Plan. Attached to this letter is a summary of Olin's response to the Agency's comments. The elements of Olin's response have been incorporated into the revised plan.

Olin requests that the Agency provide written approval of these two plans. If there are any questions regarding this submittal, please contact M. F. Redington at (618) 258-3394 or W. J. Galler at (618) 258-3026.


Very truly yours,

A handwritten signature in dark ink, appearing to read "L. W. Maxson", with a stylized flourish extending to the right.

L. W. Maxson  
Director, E & E Services

cc: Angela Aye Tin - IEPA  
Gary King Esq. - IEPA  
Jonathan Adenuga - USEPA

ek:jepa6.22

*MSB*  
*6/22/90* 

USEPA



Illinois Environmental Protection Agency

P. O. Box 19276, Springfield, IL 62794-9276

217/782-6761

Refer to: 1190200002 -- Madison County  
Olin Corporation  
ILD006271696  
Compliance File

May 8, 1990

Olin Corporation  
Attn: L.W. Maxson  
427 North Shamrock Street  
East Alton, Illinois 62024-1174

Dear Mr. Maxson:

The purpose of this letter is to address the status of the above referenced facility in relation to 35 Ill. Adm. Code Part(s) 725.194(b)(2). The Agency's findings are based on a May 7, 1990 review of documents submitted to the Agency to demonstrate compliance with the requirements of Subpart F. At the time of this record review, no apparent violations of these requirements were observed.

Should you have any questions regarding this record review, please contact Geordie Smith at 217/782-6761.

Sincerely,

*Angela Aye Tin*

Angela Aye Tin, Manager  
Technical Compliance Unit  
Compliance Section  
Division of Land Pollution Control

AAT:GDS:bjh/1678n/14

cc: Division File  
Collinsville Region  
Karen Nelson  
Chris Nifong  
Geordie Smith  
USEPA Region 5



# GARDNER, CARTON & DOUGLAS

SUITE 3400-QUAKER TOWER  
321 NORTH CLARK STREET  
CHICAGO, ILLINOIS 60610-4795

(312) 644-3000

TELEX: 25-3628

TELECOPIER: (312) 644-3381

WASHINGTON, D.C.  
DENVER, COLORADO  
SOUTHFIELD, MICHIGAN

JEFFREY C. FORT  
(312) 245-8722

January 17, 1990

Maria Gonzalez, Attorney  
United States Environmental  
Protection Agency  
Office of Regional Counsel, 5-C  
Region V  
230 South Dearborn Street  
Chicago, Illinois 60604

Dear Maria:

The purpose of this letter is to respond to your letter of November 17, 1989 and to confirm our discussions on December 8, 1989. That letter and meeting dealt with certain comments related to our Zone 6 Ground-Water Quality Assessment Report (Emergency Wastewater Holding Lagoon) submitted to the EPA on May 20, 1989.

From our last meeting (December 8, 1989), we understood that several of the rate and extent issues were dependent upon Illinois EPA concurrence. We met with the Illinois EPA on December 12, 1989, and reached agreement on several of the issues and made substantial progress on others.

After discussion of the site hydrogeology, well placement and mathematical modelling and trends in constituent concentrations, Mr. Smith concluded that he would be satisfied that Olin had successfully made a "rate and extent" determination if the following additional items were provided Olin:

- 1) A topographical map with the indicated plume of contamination shown in accordance with 35 IAC

Maria Gonzalez, Attorney  
United States Environmental  
Protection Agency  
January 17, 1990  
Page 2

703.185(d)(1). Mr. Smith stated that it was acceptable to use a mathematical model to "predict" the leading edge of constituent migration in the area between monitoring wells OMW-113, OMW-114 and wells OMW-110, OMW-111.

- 2) Olin needs to show that the degradation products of TCA and chloroform and possible other constituents previously detected by IEPA are at non-detectable levels. It was agreed that if existing data were available from previous IEPA or Olin ground-water sampling this could be used; otherwise, Olin would need to sample and analyze for these parameters.

The parameters of concern are those shown in Mr. Smith's letter to Olin of January 25, 1989 which are either known degradation products of TCA or chloroform, or constituents detected at low parts per billion concentrations during an IEPA sampling event on October 7, 1988. It should be noted that the presence of additional constituents detected have not been confirmed.

It was agreed that Olin and the IEPA would meet again on January 17 and 18, 1990 to review the above two items including Olin's and IEPA's progress toward compiling the requested data. Based on our progress with IEPA during our December 12 meeting, it appears that the rate and extent determination issues will be fully resolved with the IEPA as a result of that meeting.

As indicated to you during our meeting, Olin is also interested in resolving any reasonable outstanding issues with the EPA Region V in this matter. With these general statements in mind, the following paragraphs respond to the numbered paragraphs of your November 17, letter.

- 1) You agreed that this item is a general statement of position based upon certain other comments made in the ensuing paragraphs. Olin believes that the May, 1989 Zone 6 Ground-Water Quality Assessment Report is valid and that several issues were clarified (based on the existing data) during our meeting with IEPA on December 12, 1989.
- 2) During our meeting with IEPA on December 12, water level data and boring logs for monitoring wells OMW-113 and OMW-114 were reviewed. Olin, Law Environmental and IEPA agreed that the wells at

Maria Gonzalez, Attorney  
United States Environmental  
Protection Agency  
January 17, 1990  
Page 3

locations OMW-113 and OMW-114 are screened at the proper interval and no additional wells (including nests of wells) are necessary at these locations based on information submitted in our May, 1989, Zone 6 Ground-Water Quality Assessment Report.

- 3) The locations of wells OMW-113 and OMW-114 were approved by the IEPA prior to installation. Given the uniform hydrogeology of Zone 6 and the very low (non-detectable) levels in the last two rounds of quarterly samples, Olin can find no basis for justification for sampling the ground-water in the 100 yard interval, between these wells and wells nearer the Lagoon.

Also, with IEPA's concurrence during our December 12 meeting, Olin has agreed to indicate the location of the leading edge of constituent migration on a topographic map based on analytical modeling.

- 4) See response to comment 8.
- 5) Olin agrees in part and disagrees in part with your statements in the paragraph. We agree that this report does not involve corrective action because there is no need for any corrective action at this area and IEPA has not asked for any such action from Olin. We disagree that the MCL's for TCA or chloroform are as you suggest. First, the June 13, 1986 Federal Register dealt only with proposed MCL's. We do agree that 200 ppb is the MCL for TCA. After reviewing the Federal Register, we concur with Mr. Adenuga's assertion that the proposed MCL for chloroform is 70 ppb -- not 5 ppb level suggested by your letter.
- 6) See response to comment 8.
- 7) It became apparent during our meeting that EPA was not fully aware of the model selected nor the site-specific inputs actually used in the model. Mr. Don Miller of Law Environmental provided you with copies of the model and the calculations summarized in the report. He also indicated the pages of the report where the inputs of the model could be found. We would be glad to answer any additional questions pertaining to our use of the model. We trust that after the Agency reviews this information that this issue will be resolved.

Maria Gonzalez, Attorney  
United States Environmental  
Protection Agency  
January 17, 1990  
Page 4

4, 6, 8) It appears that the issues involved in these comments are either from a fundamental disagreement over the regulations, or perhaps simply from different assumptions on the timetable for further permitting actions for the East Alton facility. Olin expects that the East Alton plant will have a Part B permit issued to it in the relatively near future. We agreed that if that happens, then the quarterly monitoring under 35 IAC 725.193 (d)(7) would cease. Olin believes that the clean-up criteria for corrective action (724.200) are applicable, and since MCL's are being met, ground-water monitoring would terminate under that provision as well. At the same time, however, some ground-water monitoring under an approved delayed closure plan for Zone 6 or under a Part B permit may be required. We agreed that neither of us could presently predict what modification to the ground-water monitoring schedule would be required.

During the course of our meeting, you indicated displeasure with Section 10 of the assessment report as it relates to future rate and extent determination should that become necessary. Olin believes it understands what you want to see in this report and will revise Section 10 accordingly. In particular, such revision would provide the steps that would be taken in the event that a statistically significant increase in a constituent was found in a downgradient well during the interim status period.

As indicated in our meeting, we would prefer to have specific itemized comments as to the Agency's concerns with Section 10 (Future Monitoring). In lieu of this, we asked for samples of previous plans approved by the Agency which could be used for format reference. Since Olin was told neither would be provided, we are revising this section based on our understanding of your oral comments only. Attached for your consideration is a flow chart of a process that might be implemented. Once we are able to concur on the process then necessary wording can be quickly developed. In developing this flow chart we have carefully reevaluated the regulations and find nothing that requires the immediate installation of additional downgradient wells. We believe the steps outlined in the attached chart are in compliance with appropriate regulations.

Considering the significant time and cost associated with revising these documents, Olin respectfully requests the Agency review these documents carefully and focus on issues which are significant and reasonable and which are necessary to protect human health or the environment. Also, we request that any

Maria Gonzalez, Attorney  
United States Environmental  
Protection Agency  
January 17, 1990  
Page 5

further changes requested by the Agency be fully documented in writing as to the deficiency of the existing statements, regulatory justification for change and proposed revision.

Olin remains hopeful and confident that we can resolve these few remaining issues in the very near future without proceeding to hearing. We propose that, subsequent to your review of this letter, Olin's resubmittal of Section 10 and Olin's meeting with the IEPA on January 18, we again meet to resolve all outstanding issues, if any, in this matter.

Olin is also willing to discuss the terms and conditions of your prior draft CAFO and would suggest that the terms of that document need to be reconsidered in light of these comments. However, we are not willing to speculate on what changes you believe may be appropriate until we reach an understanding on the "rate and extent" issue.

I will await your call so that we can determine what further steps are appropriate.

Very truly yours,

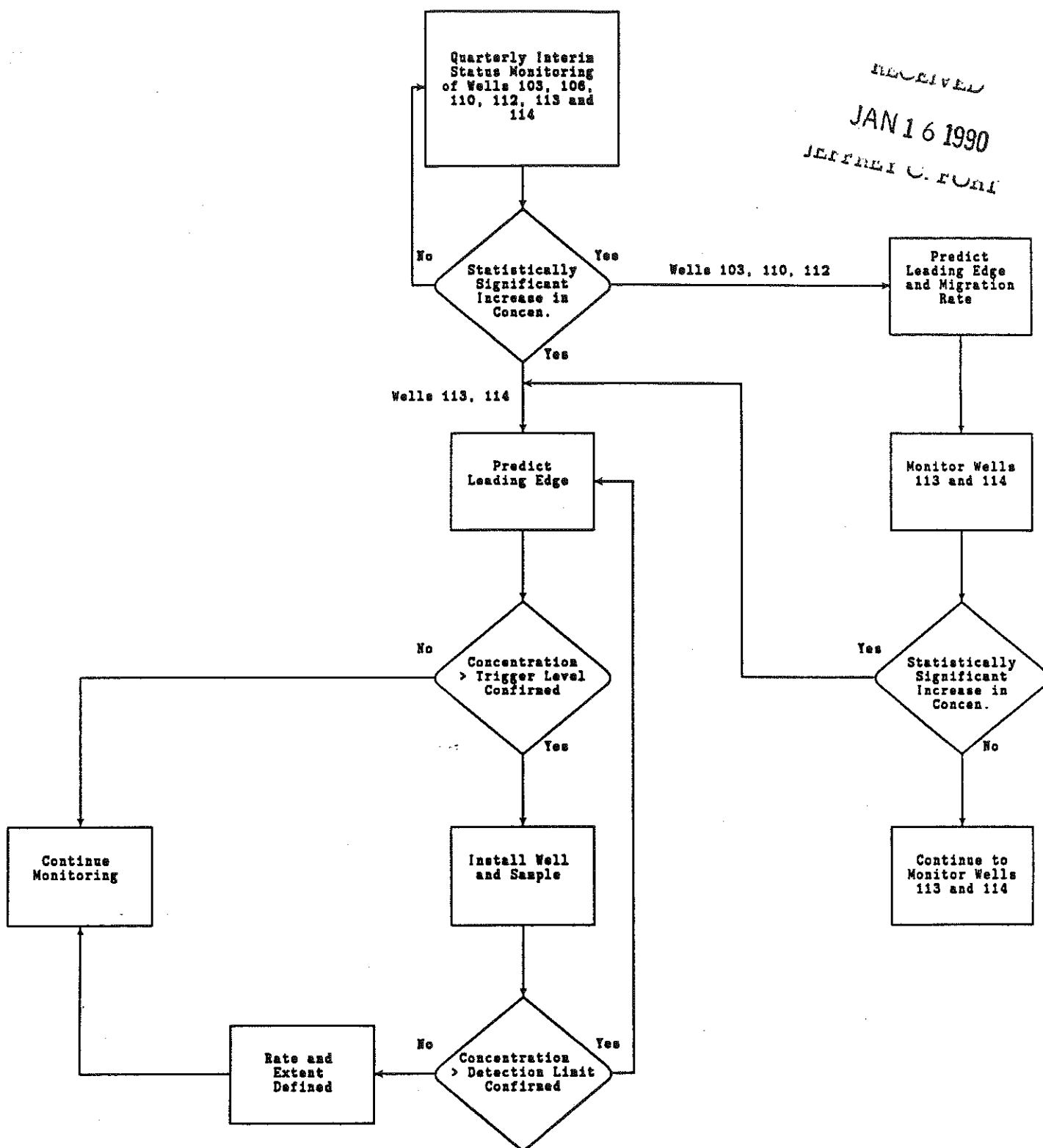


Jeffrey C. Fort

JCF/pl

3780f

cc: George H. Pain





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
ATMOSPHERIC RESEARCH AND EXPOSURE ASSESSMENT LABORATORY  
RESEARCH TRIANGLE PARK  
NORTH CAROLINA 27711

October 2, 1989

Mr. Darrell B. Derrington, Jr.  
Versar, Incorporated  
Post Office Box 1549  
Springfield, Virginia 22151

RECEIVED  
OCT 06 1989

OFFICE OF RCRA  
WASTE MANAGEMENT DIVISION  
EPA, REGION V

Dear Mr. Derrington:

The two changes to the USAEHA sampling and analysis scheme which you proposed in your recent letter appear reasonable and sound to me. I would not title the first one "Reduction in Number of Extractions," since you propose combining extracts rather than reducing extractions. I do not think actually reducing the number of extractions would be a good idea. Combining extracts, as proposed, should reduce your analysis costs without loss of information useful for the trial burn.

The second proposal of performing the analysis for both compounds on one column also seems reasonable and should not be detrimental to the data obtained.

These are my scientific opinions on the matter. As always, the final decision on these proposals rests with the appropriate regulatory agency.

Sincerely,

Larry D. Johnson, Ph.D.  
Source Methods Standardization  
Branch (MD-77A)  
Quality Assurance Division

cc: Jim Buckert, Illinois EPA (with enclosure)  
Y.J. Kim, US EPA Region 5 (with enclosure)  
Sonya Stelmack, US EPA, OSW (with enclosure)





427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174  
May 18, 1989

XC USEPA  
XC P.O.S. Rockford  
then Geordie

CERTIFIED MAIL

Angela Aye Tin, Manager  
Technical Compliance Unit  
Compliance Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
Post Office Box 19276  
Springfield, IL 62794-9276

Dear Ms. Tin:

This is in response to your Compliance Inquiry letter dated May 3, 1989, concerning the annual groundwater quality assessment report for the Zone 6 WWTF Emergency Holding ("Lagoon").

As you may know, Olin and U.S. EPA Region 5 have reached a settlement of the enforcement action dealing with the evaluation of the groundwater at the Lagoon. As part of the settlement, Olin retained Law Environmental, Inc., from Kennesaw, Ga. to prepare a comprehensive groundwater quality assessment report for the Lagoon. The report, which will cover all groundwater monitoring activities from the time that the first set of wells were installed (1984) until present day, will also include calculations indicating the rate and extent of migration of chloroform and 1,1,1, trichloroethane in the aquifer below the Lagoon. Mr. Geordie Smith of the IEPA is fully aware of the nature and scope of the settlement.

The groundwater quality assessment report will be submitted to the Agency no later than June 1, 1989.

If there are any questions, please call.

Very truly yours,

L. W. Maxson, Director,  
Energy & Environmental Services

RECEIVED

MAY 22 1989

IEPA-DLFC

WJG/vlp:13/051789

WJG  
5/18/89  
CAB



217/782-6761

Refer to: 1190200002 -- Madison County  
East Alton/Olin Corporation  
ILD006271696  
Subpart F

January 25, 1989

Olin Corporation  
Attn: L. W. Maxson  
427 N. Shamrock Street  
East Alton, Illinois 62024-1174

Dear Mr. Maxson:

The Agency has received your January 2, 1989 quarterly groundwater quality assessment report for the Zone C WWTF Emergency Holding Lagoon. The purpose of this letter is to provide written comment regarding your proposals for further groundwater assessment activities, as requested by Mr. Wayne Galler of your staff.

Your January 2, 1989 quarterly assessment results clearly indicate that the extent of groundwater contamination has not been completely characterized and that further assessment activities are warranted. You have proposed to perform two initial assessment activities in order to "further define the rate and extent of underground movement of organic compounds" (i.e., additional soil borings and installation of two additional monitoring wells), and you have stated that Agency agreement on these proposals would be determined prior to implementing these additional activities. These items were verbally discussed between Mr. Galler and Mr. Georgie Smith of my staff during a telephone conversation last week. Two modifications of your proposals were requested by the Agency:

First, in regard to your proposed well installations, you have proposed that two additional wells be initially installed, one screened at the top of the underlying aquifer and the other at the bottom of the aquifer. This screening strategy has been supported by previous soil borings conducted in the vicinity of your surface impoundment, however your current proposal indicates that these wells would be located greater than 100 feet apart. The Agency is in agreement that at least two additional locations for well placement need to be chosen in order to meet your stated objective, but we feel that it makes more sense to install a nested or clustered well group at each location thereby allowing you to draw conclusions on the extent of contamination in both horizontal and vertical dimensions.




Page 2

Second, we have requested that future assessment activities take into account the additional organic parameters that have been identified in our Closure Plan Approval Letter dated January 6, 1989. The complete list of organic assessment parameters now includes the following:

Chloroform  
1,1-Dichloroethane  
1,1-Dichloroethylene  
Methylene Chloride  
1,1,1-Trichloroethane  
Acetone  
Tetrachloroethylene  
1,1,2-Trichloroethane  
Trichloroethylene  
1,2-trans-Dichloroethylene  
1,2-cis-Dichloroethylene  
1,2-Dichloroethane.

If you have any questions or comments regarding our proposed modifications of your groundwater quality assessment activities, please contact Geordie Smith of my staff at the above number.

Sincerely,

  
Angela Aye Tin, Manager  
Technical Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control

AAT:GS:jd/0204k,89-90

cc: Division File  
Collinsville Region  
Chuck Reeter  
Geordie Smith  
Chris Wifong  
USEPA Region V

TO REGION V



427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

January 2, 1989

**CERTIFIED MAIL**

Mr. Harry A. Chappel, P.E., Acting Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
P.O. Box 19276  
Springfield, IL 62794-19276

Re: LPD 1190200002  
Madison County - East Alton  
ILD 006271696

**RECEIVED**

**JAN 5 1989**

**IEPA-DLPC**

Dear Mr. Chappel:

In accordance with Title 35 of the Illinois Administrative Code, Part 725, Subpart F, Groundwater Monitoring, Section 725.193(d)(7)(A), herewith are submitted two copies each of the following reports concerning Olin Corporation's Main Plant Facility Zone 6 WWTF Emergency Holding Lagoon:

Quarterly (October, 1988) assessment results of analyses for the parameters used as indicators of groundwater contamination.

These analyses were conducted upon samples taken from five groundwater monitoring wells that surround the Zone 6 WWTF Emergency Holding Lagoon. The five wells are identified as follows:

OMW-102	downstream
OMW-103	downstream
OMW-104	downstream
OMW-105	upstream
OMW-106	upstream

As required by Section 725.193(b) of the Agency's rules, Olin has calculated the arithmetic mean and variance for each of the indicator parameters for each well and compared these results with the initial background arithmetic mean for the two upstream wells. Olin calculated all of these results using the Averaged Replicate (AR) T-Test. The results for all five wells are shown in Tables I - V.

The comparisons (Oct., 88 results vs. initial background results) for the two upstream wells, designated as well numbers OMW-105 and OMW-106, show that there was a significant statistical change in the specific conductance values.

The comparisons for the three downstream wells, identified as OMW-102, OMW-103 and OMW-104, also showed statistically significant changes in their specific conductance values.

During a meeting in Springfield on July 22, 1987, Messrs. Geordie Smith and Ken Liss of your staff indicated to Olin that the groundwater monitoring system for the Lagoon was no longer under assessment due to significant statistical changes caused by variances in any of the indicator parameters. For this reason, Olin did not obtain additional groundwater samples as is normally required by Agency rules when significant statistical changes have occurred.

However, the Agency has required Olin to continue its assessment of the Lagoon due to the presence of two organic compounds (chloroform and 1,1,1,trichloroethane) that have been detected from previous sampling periods in both the upstream and downstream monitoring wells.

On July 28, 1988, a meeting was held in Springfield between Olin and the Compliance Monitoring & Permit Sections of the Division of Land Pollution Control. The purpose of the meeting was to discuss the Agency's requirements for additional assessment activities for the Lagoon.

As a result of the meeting, Olin agreed to install additional groundwater monitoring wells between the Lagoon and the Zone 6 WWTF Neutralization and Equalization (N & E) Basins to further define the unconsolidated geologic sequence of the soil and groundwater underlying the Lagoon. Agency expressed concern that another sand layer and therefore another aquifer might be present below the depth of the existing monitoring wells. To alleviate this concern, the Agency wants Olin to determine if a deeper aquifer exists, and if it does, to assess the extent of contamination from chloroform and 1,1,1,trichloroethane (TCA).

A Work Plan describing the proposed activity was prepared by John Mathes & Associates, Inc. (JMA) of Columbia, IL and submitted to the Agency by Olin on August 25, 1988. JMA implemented the Work Plan activity at the Zone 6 WWTF on September 20, 1988. Mr. Geordie Smith was present on September 20 - 21, 1988 to observe and help direct the Work Plan activities. The first task consisted of drilling deep soil borings down to bedrock to determine if a second aquifer exists. The first deep soil boring was drilled in the area near the northwest corner of the N & E Basins to a depth of 42.6 feet where bedrock was encountered. The soil samples from the boring did not indicate the presence of a deeper sand layer or aquifer. In accordance with Mr. Geordie Smith's request, Olin had JMA install two monitoring wells in the area of the soil boring, one at a shallow depth (OMW-109, screened from 25.8' - 30.8' below grade) and a second at an intermediate depth (OMW-111, screened from 33.5' - 38.5' below grade).

The second deep soil boring was drilled in the area near the northeast corner of the N & E Basins. The results of the second soil boring were similar to those of the first boring; bedrock was encountered at a depth of 41.4 feet below grade. Again, in accordance with Mr. Smith's instructions, Olin had JMA install a shallow well (OMW-110, screened from 23.8' - 28.8' below grade) and an intermediate well (OMW-112, screened from 36.4 - 41.4 feet below grade). The new wells were developed by JMA on Oct. 4, 1988. The monitoring well installation report, dated December 22, 1988, is enclosed.

On October 6 - 7, 1988, the four new wells (OMW-109 thru OMW-112) plus the seven existing wells (OMW-102 thru OMW-108) were sampled and later analyzed to determine the concentration of chloroform and TCA in the groundwater. Mr. Chuck Reeter, from the Illinois EPA Collinsville Office, split samples with Olin on October 7, 1988, from well numbers OMW-103 and OMW-109 thru OMW-112.

A complete summary of the organic compound analyses from the Lagoon's groundwater monitoring system is provided in Table VI.

As can be seen in Table VI, the groundwater samples taken on October 6 - 7, 1988 indicated elevated concentrations of TCA in well numbers OMW-103, OMW-110 and OMW-112. The Agency's split samples on October 7, 1988 confirmed the higher values. Since these values were higher than any levels previously detected, Olin decided to perform additional sampling and analyses to determine the validity of the results. On November 4 and 18, 1988, additional groundwater samples were taken and analyzed for chloroform and TCA from well numbers OMW-103 and OMW-109 through OMW-112. The results of the analyses for well numbers OMW-109, OMW-111 and OMW-112 indicated values for TCA that were much lower than the values detected on October 6 - 7, 1988. These lower values are comparable to the levels detected in all previously recorded data. However, the values of TCA detected in well numbers OMW-103 and OMW-110, although lower than the values detected on October 6 - 7, 1988, are still higher than all previously recorded data.

In an effort to help locate the source of the organic compounds, Olin authorized JMA to conduct a soil gas survey in the area between the Zone 6 WWTF Lagoon and N & E Basins plus the area downstream (southwest) of the N & E Basins. The survey was conducted on November 22, 23 and 29, 1988. Twenty-two (22) soil gas samples were taken from nine (9) different locations at depths ranging from five feet to twenty-five feet below the ground surface. All of the samples were analyzed for chloroform, 1,1,1,dichloroethane, and TCA. All of the results were at the lower limit of detection of the instrument being used to analyze the soil gas or below 1 ppb. These results are inconclusive and do not clearly locate the source of organics.

To help locate the source of the organic compounds, two soil borings to groundwater will be installed as indicated by bore holes (BH) A & B shown on Figure 1. The purpose of BH-A and BH-B will be to determine if possible past leakage from the pipe between the N & E Basins and the Lagoon is the source of the organics. BH-A is downstream of the pipe

while BH-B is upstream. The borings will be sampled every five feet and will be analyzed for chloroform and TCA.

To better define the rate and extent of underground movement of the organic compounds, Olin proposes to perform the assessment activities listed below:

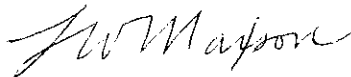
A soil boring (BH-C) to bedrock will be installed downstream of the Zone 6 WWTF, but within the Zone 6 property fence (see Figure 1). Soil samples will be collected at five foot intervals and analyzed for chloroform and TCA. Additionally, permeability tests will be performed upon the lower clay unit to determine the vertical movement of groundwater.

Initially, two monitoring wells will be installed (two inch stainless steel) with one screened (five feet) at the top of the underlying aquifer and the other screened at the bottom of the aquifer. If additional sand layers are detected from the soil boring(s), then additional well(s) will be installed so as to determine if they are contaminated with the same organic compounds.

Before the new wells and soil borings are installed, Olin will call the Agency to determine if there is agreement in this next phase of assessment. Anticipated timing for initiation of this phase is February, 1989.

If there are any questions concerning this submittal, please do not hesitate to contact me at (618) 258-3033.

Very truly yours,



L. W. Maxson, Director,  
Energy & Environmental Services

WJH  
12/29/88  
G/bjv:13/1221881

CERTIFIED MAIL

Mr. K. G. Mensing  
Southern Regional Manager  
Field Operations Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

Mr. L. W. Eastep, Manager  
Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

Mr. Geordie Smith  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
P.O. Box 19276  
Springfield, IL 62794-19276



TABLE I  
OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTON, IL 62024

STATISTICAL ANALYSES FOR  
ZONE 6 EMERGENCY HOLDING LAGOON  
OLIN GROUNDWATER MONITORING WELL #OMW-102

<u>TIME PERIOD OF SAMPLING</u>	<u>pH</u>	<u>SPEC COND (UMHOS)</u>	<u>TOX (MG/L)</u>	<u>TOC (MG/L)</u>
October 6 - 7, 1988				
	6.3	969	<0.01	3.43
	6.3	984	<0.01	3.25
	6.2	969	0.01	3.22
	6.3	984	<0.01	3.22
Mean (Xm)	6.3	976	0.01	3.28
Bkd Mean (Xb)	6.4	560.4	0.00	4.90
Sqrt. of Bkd Var.(Sb)	0.2	112.4	0.02	9.1
T-Statistic (T*)	0.4	3.5	0.5	-0.2
Comp. Statistic (Tc)	3.5	3.0	3.0	3.0

NOTES: BACKGROUND VALUES CALCULATED FROM UPSTREAM WELL  
NUMBERS OMW-105 AND OMW-106.

CRITICAL T-VALUES FOR pH CALCULATED USING 0.01  
LEVEL OF SIGNIFICANCE; TWO TAILED; 7 DEGREES OF  
FREEDOM.

CRITICAL T-VALUES FOR OTHER PARAMETERS CALCULATED  
USING 0.01 LEVEL OF SIGNIFICANCE; ONE TAILED; 7  
DEGREES OF FREEDOM.

TABLE II  
OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTON, IL 62024

STATISTICAL ANALYSES FOR  
ZONE 6 EMERGENCY HOLDING LAGOON  
OLIN GROUNDWATER MONITORING WELL #OMW-103

<u>TIME PERIOD OF SAMPLING</u>	<u>pH</u>	<u>SPEC COND (UMHOS)</u>	<u>TOX (MG/L)</u>	<u>TOC (MG/L)</u>
October 6 - 7, 1988				
	7.1	1070	0.08	5.17
	7.1	1081	0.12	5.65
	7.1	1058	0.12	6.06
	7.1	1058	0.12	5.52
Mean (Xm)	7.1	1066	0.11	5.60
Bkd Mean (Xb)	6.4	560.4	0.00	4.90
Sqrt. of Bkd Var.(Sb)	0.2	112.4	0.02	9.1
T-Statistic (T*)	3.1	4.2	0.1	0.1
Comp. Statistic (Tc)	3.5	3.0	3.0	3.0

NOTES: BACKGROUND VALUES CALCULATED FROM UPSTREAM WELL  
NUMBERS OMW-105 AND OMW-106.

CRITICAL T-VALUES FOR pH CALCULATED USING 0.01  
LEVEL OF SIGNIFICANCE; TWO TAILED; 7 DEGREES OF  
FREEDOM.

CRITICAL T-VALUES FOR OTHER PARAMETERS CALCULATED  
USING 0.01 LEVEL OF SIGNIFICANCE; ONE TAILED; 7  
DEGREES OF FREEDOM.

TABLE III  
OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTON, IL 62024

STATISTICAL ANALYSES FOR  
ZONE 6 EMERGENCY HOLDING LAGOON  
OLIN GROUNDWATER MONITORING WELL #OMW-104

<u>TIME PERIOD OF SAMPLING</u>	<u>pH</u>	<u>SPEC COND (UMHOS)</u>	<u>TOX (MG/L)</u>	<u>TOC (MG/L)</u>
October 6 - 7, 1988				
	6.5	1655	0.02	15.2
	6.5	1643	0.02	12.9
	6.6	1643	0.02	11.2
	6.6	1673	0.02	13.2
Mean (Xm)	6.6	1653	0.02	13.1
Bkd Mean (Xb)	6.4	560.4	0.00	4.90
Sqrt. of Bkd Var.(Sb)	0.2	112.4	0.02	9.1
T-Statistic (T*)	0.9	9.2	0.9	0.9
Comp. Statistic (Tc)	3.5	3.0	3.0	3.0

NOTES: BACKGROUND VALUES CALCULATED FROM UPSTREAM WELL  
NUMBERS OMW-105 AND OMW-106.

CRITICAL T-VALUES FOR pH CALCULATED USING 0.01  
LEVEL OF SIGNIFICANCE; TWO TAILED; 7 DEGREES OF  
FREEDOM.

CRITICAL T-VALUES FOR OTHER PARAMETERS CALCULATED  
USING 0.01 LEVEL OF SIGNIFICANCE; ONE TAILED; 7  
DEGREES OF FREEDOM.

TABLE IV  
OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTON, IL 62024

STATISTICAL ANALYSES FOR  
ZONE 6 EMERGENCY HOLDING LAGOON  
OLIN GROUNDWATER MONITORING WELL #OMW-105

<u>TIME PERIOD OF SAMPLING</u>	<u>pH</u>	<u>SPEC COND (UMHOS)</u>	<u>TOX (MG/L)</u>	<u>TOC (MG/L)</u>
October 6 - 7, 1988				
	6.6	1345	<0.01	9.47
	6.6	1360	<0.01	10.6
	6.6	1368	<0.01	9.72
	6.6	1368	<0.01	8.75
Mean (Xm)	6.6	1360	<0.01	9.64
Bkd Mean (Xb)	6.4	560.4	0.00	4.90
Sqrt. of Bkd Var.(Sb)	0.2	112.4	0.02	9.1
T-Statistic (T*)	0.9	6.7	0.5	0.5
Comp. Statistic (Tc)	3.5	3.0	3.0	3.0

NOTES: BACKGROUND VALUES CALCULATED FROM UPSTREAM WELL  
NUMBERS OMW-105 AND OMW-106.

CRITICAL T-VALUES FOR pH CALCULATED USING 0.01  
LEVEL OF SIGNIFICANCE; TWO TAILED; 7 DEGREES OF  
FREEDOM.

CRITICAL T-VALUES FOR OTHER PARAMETERS CALCULATED  
USING 0.01 LEVEL OF SIGNIFICANCE; ONE TAILED; 7  
DEGREES OF FREEDOM.

TABLE V  
OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTON, IL 62024

STATISTICAL ANALYSES FOR  
ZONE 6 EMERGENCY HOLDING LAGOON  
OLIN GROUNDWATER MONITORING WELL #OMW-106

<u>TIME PERIOD OF SAMPLING</u>	<u>pH</u>	<u>SPEC COND (UMHOS)</u>	<u>*TOX (MG/L)</u>	<u>TOC (MG/L)</u>
October 6 - 7, 1988				
	6.5	1422	<0.01	9.75
	6.6	1439	<0.01	9.41
	6.6	1423	<0.01	9.72
	6.6	1423	<0.01	8.75
Mean (Xm)	6.6	1426	<0.01	9.41
Bkd Mean (Xb)	6.4	560.4	0.00	4.90
Sqrt. of Bkd Var.(Sb)	0.2	112.4	0.02	9.1
T-Statistic (T*)	0.9	7.3	0.5	0.5
Comp. Statistic (Tc)	3.5	3.0	3.0	3.0

NOTES: BACKGROUND VALUES CALCULATED FROM UPSTREAM WELL NUMBERS OMW-105 AND OMW-106.

CRITICAL T-VALUES FOR pH CALCULATED USING 0.01 LEVEL OF SIGNIFICANCE; TWO TAILED; 7 DEGREES OF FREEDOM.

CRITICAL T-VALUES FOR OTHER PARAMETERS CALCULATED USING 0.01 LEVEL OF SIGNIFICANCE; ONE TAILED; 7 DEGREES OF FREEDOM.

\* TOX samples taken on 4/5/88.

TABLE VI  
ORGANIC ANALYSES SUMMARY

Chloroform (ppb)

	<u>Upstream Wells</u>				<u>Lagoon</u>	<u>Downstream Wells</u>							
	<u>101</u>	<u>105</u>	<u>106</u>	<u>108</u>		<u>102</u>	<u>103</u>	<u>104</u>	<u>107</u>	<u>109</u>	<u>110</u>	<u>111</u>	<u>112</u>
8/85 IEPA	NT	-1	-1	NT	NT	-1	16	-1	NT	NT	NT	NT	NT
8/86 Olin	NT	-1	1	NT	NT	-1	12	-1	NT	NT	NT	NT	NT
12/86 Olin	NT	NT	NT	NT	5	NT	5	2	NT	NT	NT	NT	NT
12/86 IEPA	NT	NT	NT	NT	3	NT	4	3	NT	NT	NT	NT	NT
3/87 Olin	NT	1	-1	NT	NT	-1	-1	9	NT	NT	NT	NT	NT
6/87 Olin	NT	7	1	NT	NT	9	7	8	NT	NT	NT	NT	NT
9/87 Olin	5	5	2	NT	5	4	5	2	6	NT	NT	NT	NT
12/87 Olin	-1	-1	-1	NT	NT	-1	-1	-1	-1	NT	NT	NT	NT
3/88 Olin	NT	-2	-2	-2	NT	-2	7	3	-2	NT	NT	NT	NT
6/88 Olin	NT	-5	-5	-5	NT	-5	5	-5	-5	NT	NT	NT	NT
10/6-7/88													
Olin	NT	-1	-1	-1	NT	-1	-5*	-1	1	1*	6*	13*	2*
10/7/88													
IEPA	NT	NT	NT	NT	NT	NT	7*	NT	NT	-5*	6*	12*	-5*
11/4/88													
Olin	NT	NT	NT	NT	NT	NT	1	NT	NT	-1	3	-1	-1
11/18/88													
Olin	NT	NT	NT	NT	NT	NT	-1	NT	NT	1	3	-1	-1

1,1,1 Trichloroethane (ppb)

<u>Date</u>	<u>Upstream Wells</u>				<u>Lagoon</u>	<u>Downstream Wells</u>							
	<u>101</u>	<u>105</u>	<u>106</u>	<u>108</u>		<u>102</u>	<u>103</u>	<u>104</u>	<u>107</u>	<u>109</u>	<u>110</u>	<u>111</u>	<u>112</u>
8/85 IEPA	NT	-1	-1	NT	NT	1	9	-1	NT	NT	NT	NT	NT
8/86 Olin	NT	-1	1	NT	NT	1	8	-1	NT	NT	NT	NT	NT
12/86 Olin	NT	NT	NT	NT	1	NT	10	1	NT	NT	NT	NT	NT
12/86 IEPA	NT	NT	NT	NT	1	NT	4	2	NT	NT	NT	NT	NT
3/87 Olin	NT	-1	-1	NT	NT	1	5	2	NT	NT	NT	NT	NT
6/87 Olin	NT	1	-1	NT	NT	1	2	-1	NT	NT	NT	NT	NT
9/87 Olin	1	-1	3	NT	2	1	3	-1	2	NT	NT	NT	NT
12/87 Olin	-1	-1	-1	NT	NT	1	-1	-1	-1	NT	NT	NT	NT
3/88 Olin	NT	-2	-2	-2	NT	2	20	3	-2	NT	NT	NT	NT
6/88 Olin	NT	-5	-5	5	NT	5	-5	-5	-5	NT	NT	NT	NT
10/6-7/88													
Olin	NT	-1	-1	1	NT	1	67*	2	-1	-1*	80*	-1*	57*
10/7/88													
IEPA	NT	NT	NT	NT	NT	NT	53*	NT	NT	-5*	50*	-5*	40*
11/4/88													
Olin	NT	NT	NT	NT	NT	NT	21	NT	NT	2	29	-1	13
11/18/88													
Olin	NT	NT	NT	NT	NT	NT	24	NT	NT	1	34	-1	11

NT = NOT TESTED

\* IT SAMPLES ANALYZED BY THE IEPA.

NOTE: - SIGN INDICATES "LESS-THAN"

13/1107881

# GARDNER, CARTON & DOUGLAS

SUITE 300 QUAKER TOWER

321 NORTH CLARK STREET

CHICAGO, ILLINOIS 60610-4795

(312) 644-3000

TELECOPIER: (312) 644-3381

(312) 644-3382

TELEX: 25-3628

WASHINGTON, D.C.

LIBERTYVILLE, ILLINOIS

DENVER, COLORADO

DALLAS, TEXAS

WRITER'S DIRECT DIAL NUMBER

JEFFREY C. FORT

(312) 245-8722

TELECOPIER:

September 9, 1988

Maria E. Gonzalez, Esq.  
Assistant Regional Counsel  
U.S. Environmental Protection Agency  
Region 5, 230 South Dearborn Street  
Chicago, Illinois 60604

Dear Maria:

As we discussed, I am submitting the following summary of the status of the technical discussions between Olin and IEPA. This status report is submitted to you for purposes of preparing a motion for extension of time for prehearing exchange of documents.

Olin met with IEPA on July 28, 1988 to discuss Olin's Groundwater Assessment Report and any changes recommended by IEPA. IEPA reviewed both Olin's Quarterly Assessment Report and the Closure Plan for the Zone 6 Wastewater Treatment Facility (WWTF). During the July 28, 1988 meeting, IEPA presented Olin with copies of drilling logs from drilling activities conducted on Olin's property sometime in the early 1900's. Based on the drilling that occurred in the area closest to Zone 6, IEPA was concerned that there may be another sand layer and aquifer below the depth of any existing wells in the Zone 6 monitoring system. To alleviate this concern, IEPA requested that Olin determine if a deeper aquifer existed and, if it did, to assess that aquifer for contamination.

A subsequent review of Olin's environmental files resulted in the location of a report of a subsurface investigation of



Ms. Maria E. Gonzalez  
September 9, 1988  
Page 2

Zone 6 conducted by the consulting engineering firm of Reitz and Jens in November 1970. The investigation was conducted to define the subsurface conditions prior to the construction of the Zone 6 WWTF. The soil boring logs contained in the Reitz and Jens report indicated that the geologic sequence at lower depths under the lagoon is not similar to the geologic sequence specified in IEPA's drilling logs.

Even though the data in the Reitz and Jens report differentiated the geologic sequence underlying the lagoon from that identified in the drilling logs, Olin has agreed to conduct additional groundwater assessment activities. A work plan for those activities was prepared by John Mathes and Associates, Inc. (JMA). The purpose of the work plan is to further define the unconsolidated geologic sequence of the soil and groundwater underlying the lagoon.

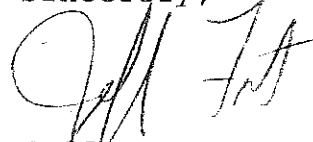
Based on the information contained in the Reitz and Jens report and previous data collected by JMA, Olin proposes additional soil borings be conducted and/or monitoring wells be installed at the Zone 6 WWTF, beginning on September 19, 1988. First, one additional shallow groundwater monitoring well will be installed. Second, soil borings will be conducted at the locations specified in the work plan. Third, if deep or intermediate aquifers are detected, additional wells will be installed. Groundwater samples from the new well(s) and the existing wells will be taken together at the next quarterly assessment sampling time, tentatively scheduled for the week of October 3, 1988.

It is Olin's understanding that these assessment activities are required as a condition of closure of the lagoon. Further, Olin understands that IEPA will provide comments as part of its response to the Closure Plan, which was submitted by Olin on June 7, 1988. The work plan prepared by JMA was submitted to Mr. Geordie Smith of IEPA on August 25, 1988. At this time, comments have not been received from IEPA regarding the work plan proposals.

Ms. Maria E. Gonzalez  
September 9, 1988  
Page 3

If you have any questions concerning the status of the technical discussions with IEPA, please feel free to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Jeff Fort', written over the word 'Sincerely,'.

Jeffrey C. Fort.

JCF/MBF/bsd  
5873f

CC: George Pain, Esq.  
Mike Roark



EAST ALTON, ILLINOIS 62024-9988

August 25, 1988

**CERTIFIED MAIL**

Mr. Geordie Smith  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
P.O. Box 19276  
Springfield, IL 62794-19276

Re: LPD 1190200002 *Olin Corp - main Plant*  
Madison County - East Alton  
ILD 006271696  
*Support F*

Dear Mr. Smith:

Please find enclosed a work plan that outlines additional groundwater assessment activities for Olin's Emergency Holding Lagoon at the Zone 6 Wastewater Treatment Facility. The plan was prepared by John Mathes & Associates, Inc. (JMA) in response to a meeting that was held in Springfield between Olin and the Compliance Monitoring & Permit Sections of the Division of Land Pollution Control on July 28, 1988.

The purpose of the work plan is to further define the unconsolidated geologic sequence of the soil & groundwater underlying the Lagoon. During the July 28, 1988 meeting, the Agency presented Olin with copies of drilling logs obtained from the Illinois State Water Survey that had been taken at the "Shot Tower" and "Shooting Grounds" on Olin's property sometime in the early 1900's.

Based on the drilling log from the Shot Tower which is the area closest to Zone 6 (of the two logs), the Agency was concerned that there may be another sand layer and therefore an aquifer below the depth of any of the existing wells in the Zone 6 WWTF Lagoon groundwater monitoring system (OMW-101 thru OMW-108). To alleviate this concern, the Agency wants Olin to determine if a deeper aquifer exists and if it does, to assess the extent of contamination by chloroform and/or 1,1,1 TCA, which are two organic compounds known to be present in the uppermost aquifer underlying the Lagoon.

RECEIVED

AUG 26 1988

IEPA-DLPC

Olin contacted and met with JMA shortly after the meeting of July 28, 1988 to discuss the Agency's concerns. A review of Olin's environmental files resulted in finding a subsurface investigation report of Zone 6, dated November, 1970 and conducted by Reitz & Jens, a consulting engineering firm in St. Louis, MO. The investigation was conducted to define the subsurface conditions prior to the construction of the Zone 6 Wastewater Treatment Facility. A review of the soil boring logs contained in the report (a copy of which is attached with JMA's plan) indicates that the geologic sequence at lower depths under the Lagoon is not similar to the geologic sequence under the Shot Tower.

Based on the information contained in the Reitz & Jens report and previous data collected by JMA for the Lagoon's groundwater monitoring network, Olin proposes the installation of additional soil borings and/or monitoring wells at the Zone 6 WWTF beginning on September 12, 1988 as follows (Refer to Figure 4 in attached JMA report):

1. Installation of one shallow groundwater monitoring well, OMW-109.
2. Installation of two deep soil borings, OMW-301 & OMW-303.
  - a. If there are no "deep" or "intermediate" aquifers found during the drilling of OMW-301 or OMW-303, no additional wells will be installed.
  - b. If "deep" aquifers are detected, then wells will be placed in OMW-301 and/or OMW-303.
  - c. If "intermediate" aquifers are detected, then two intermediate monitoring wells OMW-201 & OMW-202 will be installed.
3. Installation of a deep soil boring OMW-302. If a deep aquifer is detected, then a well will also be installed.

All wells will be developed about two weeks after their installation.

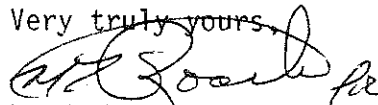
Groundwater samples from the new wells & the existing wells will be taken together at the next quarterly assessment sampling time, tentatively scheduled for the week of September 26, 1988.

It is Olin's understanding that these assessment activities will be required by the Agency as a condition of "clean" closure for the Lagoon. It is our further understanding that the Agency will provide comments to this effect as part of the response to the Closure Plan for the Lagoon, which was prepared by JMA & submitted by Olin on June 7, 1988.

Personnel from the Agency are invited to observe the installation of the soil borings & monitoring wells when the work commences on September 12, 1988. Please contact W. J. Galler at (618) 258-3026 in advance so that passes for members of the Agency can be prepared ahead of time.

If there are any questions concerning this submittal, please do not hesitate to contact me.

Very truly yours,



L. W. Maxson, Director  
Energy & Environmental Services

WJM/alm:13/0823881

Attachments

CERTIFIED MAIL

cc: Mr. K. G. Mensing  
Southern Regional Manager  
Field Operations Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

Mr. L. W. Eastep, Manager  
Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706



EAST ALTON, ILLINOIS 62024-9988

April 12, 1988

**CERTIFIED MAIL**

Mr. Geordie D. Smith  
Technical Compliance Unit  
Compliance Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62794-9276

Re: LPC #1190200002-Madison County  
East Alton/Olin Corp.-Main Plant Facility  
ILD006271696  
Subpart F

Dear Mr. Smith:

This is to inform you that Olin has installed an eighth groundwater monitoring well for its Zone 6 WWTF Emergency Holding Lagoon between the E. Fork of the Wood River and the Wood River Levee. The well was installed by John Mathes & Assoc., Inc. on March 30, 1988.

Its approximate location is shown on the attached drawing and is indicated with the number "108".

The well was developed by John Mathes & Assoc., Inc. personnel on April 1, 1988 and was sampled by Environmental Analysis, Inc. (from St. Louis, MO) on April 4, 1988.

As soon as the results of the analyses of the groundwater samples are available, they will be forwarded to your office.

Should you have any questions regarding this project please feel free to contact this office.

Very truly yours,

A handwritten signature in cursive script, appearing to read "L. W. Maxson".

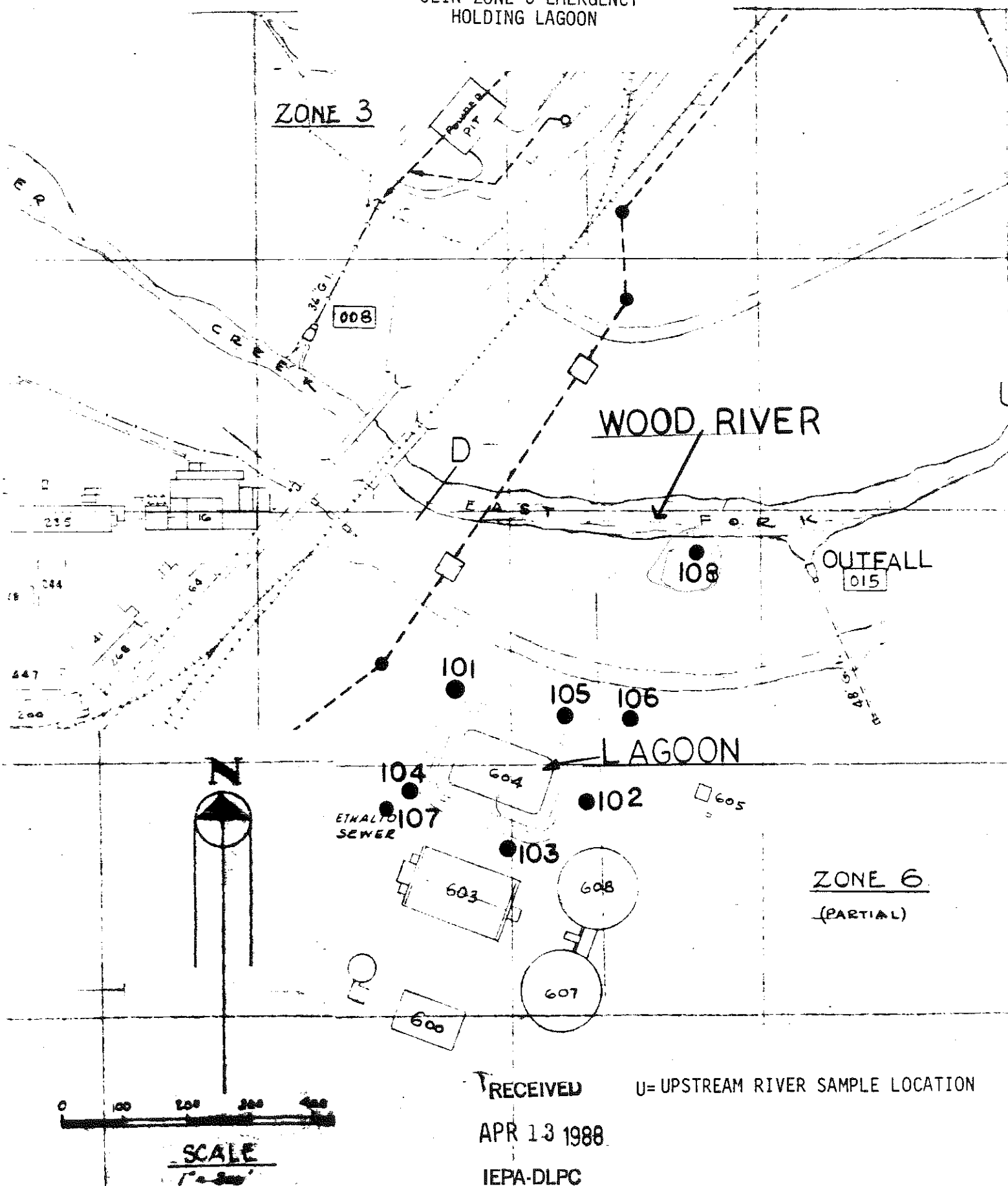
L. W. Maxson, Director  
Energy & Environmental Services

WJG/aln:13/0408881

Handwritten initials "WJG" and the date "4/13/88" with a signature.

RECEIVED  
APR 13 1988  
IEPA-DLPQ

LOCATION OF RIVER SAMPLE POINTS  
OLIN ZONE 6 EMERGENCY  
HOLDING LAGOON



RECEIVED

APR 13 1988

IEPA-DLPC

U= UPSTREAM RIVER SAMPLE LOCATION

D= DOWNSTREAM RIVER SAMPLE LOCATION





EAST ALTON, ILLINOIS 62024-1174

February 8, 1988

*File 2661w  
Approved*

**CERTIFIED MAIL**

Mr. Geordie D. Smith  
Technical Compliance Unit  
Compliance Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62794-9276

Re: LPC #1190200002-Madison County  
East Alton/Olin Corp.-Main Plant  
ILD006271692  
Subpart F

Dear Mr. Smith:

This response is made in accordance with your request of January 20, 1988 to provide a description of the steps we will take pursuant to the next phase of our groundwater assessment program.

We believe that we have presented a sound argument to support our contention that the Zone 6 Emergency Holding Lagoon is not the source of low level organics sometimes detected in the groundwater monitoring wells.

As stated previously, we do not consider the levels of organics detected to be high enough to establish gradient lines. We consider the values detected to be representative of background.

In light of your concerns; however, we have given consideration to the installation of another single upstream well. This well would be located on the river side of the levee just north of the lagoon.

Installation of the well is subject to approval of the Wood River Levee District and U.S. Corp of Engineers.

Attached to this response is a copy of our request to the Levee District for permission to install the well.

Provided permission to proceed is received from the IEPA and the Levee District, we intend to install and develop the well so that it may be sampled along with the existing wells at our next scheduled quarterly monitoring date in March, 1988.

It is our hope that this action will be sufficient to resolve any remaining issues with regard to this assessment program.

To meet regulatory deadlines, we are proceeding with closure of this lagoon. As you are aware, Olin intends to close the lagoon for receipt of hazardous waste once a new wastewater treatment facility is brought on-line. Our intention is to continue to use this lagoon for non-hazardous wastewater after the closure.

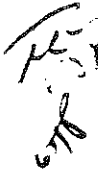
Unless advised otherwise by you, we will proceed with installation of the additional well as indicated herein.

Should you have any questions regarding this project please feel free to contact this office.

Very truly yours,



L. W. Maxson

alm:11/0204882



217/782-6761

Refer to: LPC #1190200002 -- Madison County  
East Alton/Olin Corporation - Main Plant  
ILD006271696  
Subpart F

January 20, 1988

*Rec'd  
Jan 28, 1988*

Mr. L. W. Maxson  
Olin Corporation  
Shamrock Street  
East Alton, IL 62024

Dear Mr. Maxson:

The Agency is in receipt of your November 27, 1987 "Groundwater Quality Assessment Report for the Zone 6 WWTF Emergency Holding Lagoon". This report has been reviewed and, though your conclusions seem logical, the data submitted thus far are deemed insufficient in themselves to support your conclusions. An additional phase of your groundwater assessment program is required to either support or refute your current hypothesis.

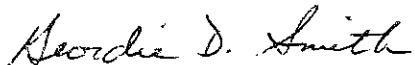
The major weakness in data submitted thus far is that contaminants have only recently been detected in upgradient monitoring wells. If your hypothesis is correct, contaminants should have been detected in upgradient wells before downgradient wells. Furthermore, adequate well purging prior to sampling should have effectively removed the concerns you have postulated over this particular discrepancy in your findings.

The next phase of your groundwater assessment should focus on providing corroborative data to support your current hypothesis. There are two pieces of information that would be particularly enlightening in this regard. First, your diagrammatic representation of the "assumed path of organics travel in aquifer" (Figure A-5) on the far side of the levee is, by your own admission during our December 14, 1987 meeting, based on conjecture rather than actual hydrogeological sampling. Second, if your current hypothesis is correct, we would expect to see a contaminant concentration gradient between the relatively high levels in the Wood River, downstream from your point of discharge, and the relatively lower levels detected in your present monitoring well system.

Please submit in writing, within thirty (30) days of the date of this letter, a description of the steps you will take pursuant to this next phase of your groundwater quality assessment program. In addition, please be advised that the apparent violation of 35 Ill. Adm. Code 725.193(d)(4) cited in our June 16, 1987 Compliance Inquiry Letter cannot be resolved until the rate and extent of contamination has been adequately described, or until you have adequately demonstrated a source of contamination other than the regulated unit.

If you have any questions, please contact me at 217/782-6761.

Sincerely,



Geordie D. Smith  
Technical Compliance Unit  
Compliance Section  
Division of Land Pollution Control

GDS:tk:2/16/29-1

cc: Division File  
Collinsville Region  
Angela Tin  
Glenn Savage  
Gary King  
Chuck Reeter  
USEPA, Region V



MEMORANDUM

DATE: June 17, 1987

TO: Gary King, Enforcement Decision Group

FROM: Geordie Smith, Compliance

RE: 1190200002 -- Madison Co.

East Alton/Olin Corp. - Main plant

ILD006271696

Subpart F

This memorandum is to request referral of the subject facility to USEPA for issuance of an administrative order for non-compliance with 35 Ill. Adm. Code Part 725 Subpart(s) F.

The subject Land Disposal Facility has been identified as a High Priority Violator (HPV) and, in accordance with USEPA's current Enforcement Response Policy, HPV's must be referred to the Region for issuance of an order, with penalty, within 90 days of the date of discovery.

The above referenced violations are based upon a(n) June 11, 1987  
Record Review. The following documents are attached in support of the requested referral:

June 16, 1987 Compliance Inquiry Letter

GS:jp:2/45

Attachments

cc: Division, Enforcement File  
Southern Region

Bruce Carlson

Bur Filson

Chuck Reeter

Wally El-Beck

RECEIVED  
ENFORCEMENT PROGRAMS

JUN 17 1987

Environmental Protection Agency



217/782-6761

Refer to: 1190200002 -- Madison County  
East Alton/Olin Corp. -- Main Plant  
ILD006271696  
Compliance File

COMPLIANCE INQUIRY LETTER

Certified #

June 16, 1987

Olin Corporation  
Attention: L. W. Maxson  
Shamrock Street  
East Alton, Illinois 62024

Dear Mr. Maxson:

The purpose of this letter is to address the status of the above-referenced facility in relation to the requirements of 35 Ill. Adm. Code 725, Subpart F and to inquire as to your position with respect to the apparent violations identified in Attachment A and your plans to correct these apparent violations. The Agency's findings of apparent non-compliance as listed in Attachment A are based on a June 11, 1987 review of documents submitted to the Agency to demonstrate compliance with the requirements of Subpart F.

Please submit in writing, within fifteen (15) calendar days of the date of this letter, the reasons for the identified violations, a description of the steps which have been taken to correct the violations and a schedule, including dates, by which each violation will be resolved. These resolution dates are not to exceed 60 days from the date of the above referenced inspection and/or record review. The written response, and two copies of all documents submitted in reply to this letter, should be sent to the following:

Harry A. Chappel, P.E., Acting Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
Post Office Box 19276  
Springfield, Illinois 62794-9276

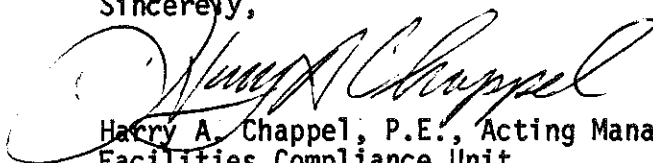


Page 2

Further, take notice that because some or all of the apparent violations cited constitute high priority violations (HPVs), in accordance with the USEPA Enforcement Response Policy this matter is being referred to USEPA Region 5 or the Illinois Attorney General's Office to seek assessment of a penalty pursuant to either the Illinois Environmental Protection Act, Ill. Rev. Stat., Ch. 111 1/2, Sec. 1001 et seq. or the federal Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Sec. 6901 et seq.

If you have any questions regarding the above, please contact Geordie Smith at 217/782-6761.

Sincerely,

  
Harry A. Chappel, P.E., Acting Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control

HAC:GDS:BF:jk/2810g,24-25

cc: Division File  
Southern Region  
Wally El-Beck  
Bruce Carlson  
Chuck Reeter  
Bur Filson  
Geordie Smith  
USEPA Region V





Attachment A

1. Pursuant to 35 Ill. Adm. Code 725.193(d)(4), the owner or operator must implement the groundwater quality assessment plan which satisfies the requirements of paragraph (d)(3) and, at a minimum, determine:
  - A. The rate and extent of migration of the hazardous waste or hazardous waste constituents in the groundwater; and
  - B. The concentrations of the hazardous waste or hazardous waste constituents in the groundwater.

You are in apparent violation of 35 Ill. Adm. Code 725.193(d)(4) for the following reason(s): You failed to determine the rate and extent of migration of hazardous waste constituents detected in monitoring wells OMW-103 and OMW-104. Specifically, chloroform and 1,1,1-trichloroethylene have been detected in both downgradient monitoring wells, but were not detected in your upgradient well. Identical organic compounds have been previously detected in your holding lagoon.

HAC:GDS:BF:jk/2810g,26

① Rec Plan in EIR inadequate assess plan

② 3008 E) G) to IERR  
only due to the inadequacy of  
the GRRP.

NOV 16 1987

5HS-13

L.W. Maxson, Director  
Engineering and Environmental Services  
Olin Corporation, Main Plant  
Shamrock Street  
East Alton, Illinois 62024

Re: Sampling Visit  
ILD 006271696

Dear Mr. Maxson:

This is to inform you that United States Environmental Protection Agency representatives will sample the Solid Waste Management Units at your facility, in accordance with section 3004(u) of the Resource Conservation and Recovery Act.

The objective of this sampling visit is to determine whether any hazardous waste or hazardous constituents have been released into the environment from the Solid Waste Management Units. As you are aware, the Hazardous and Solid Waste Amendments of 1984 (HSWA) added a number of requirements for facilities seeking a permit. One of these requirements is to address corrective action for all releases into the environment from Solid Waste Management Units, regardless of the time at which waste was placed in such units.

The sampling visit is scheduled for November 18, 1987. We plan to collect water and soil samples from the East and West Sloughs, and the Material Reclamation Facility.

Should you have any questions on the above subject, please contact Juana Rojo of my staff, at (312) 886-0990.

Sincerely yours,

ORIGINAL SIGNED BY/  
GEORGE J. HAMPER

Karl E. Bremer, Chief  
Technical Programs Section

cc: Larry Eastep, IEPA

Juana Rojo:jhg (11/13-87) Disk #7

*Am 11-13-87*

TYP.	AUTH.	IL. CHIEF	IN. CHIEF	ML. CHIEF	MN/WI CHIEF	OH. CHIEF	TPS CHIEF	SWS CHIEF	W&S CHIEF
<i>FW 11/13/87</i>	<i>ger 11/13/87</i>	<i>[Signature] 11/13/87</i>				<i>[Signature] for KERS</i>			



RESPONSE TO 6/16/87 CIL.

EAST ALTON, ILLINOIS 62024-1174

June 29, 1987

**CERTIFIED MAIL**

Mr. Harry A. Chappel, P.E., Acting Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
Post Office Box 19276  
Springfield, Illinois 62794-9276

Re: 1190200002 -- Madison County  
East Alton/Olin Corp. -- Main Plant  
ILD006271696  
**COMPLIANCE FILE**

Dear Mr. Chappel:

This is in response to your Compliance Inquiry Letter (CIL) dated June 16, 1987, concerning an apparent non-compliance associated with Olin's recently submitted Groundwater Quality Assessment Report for its Zone 6 WWTF Emergency Holding Lagoon.

The Agency stated in the CIL that Olin failed to determine the rate and extent of migration of chloroform and "1,1,1, trichloroethylene" (presumably, 1,1,1, trichloroethane) which have been detected in low concentrations in two of the three downgradient monitoring wells identified as OMW-103 and OMW-104. Since we have prepared and submitted a detailed report addressing the rate and extent of hazardous waste constituents, including chloroform and 1,1,1, trichloroethane, we do not believe that Olin has failed to satisfy the requirements of 35 Ill. Adm. Code 725.193(d)(4) as suggested by the Agency.

Olin has communicated closely with the Illinois EPA on all matters concerning groundwater quality assessment for the Lagoon. Olin refers the Agency to copies of correspondence (attached) dated November 24 and December 17, 1986, indicating agreement by Olin to conduct additional assessment actions (quarterly monitoring to begin in December, 1986) for monitoring well number OMW-103 and an understanding that the rate and extent of contamination would be further defined at a time when assessment data have been collected and submitted to the Agency. It was Olin's understanding that a decision concerning whether additional monitoring wells or soil borings would be needed to identify the source of contamination was to be made jointly after the Agency reviewed the Assessment Report.

Furthermore, since Olin and the Agency have not yet discussed the results of the assessment report, as we agreed, to determine if additional assessment actions are still warranted, Olin does not believe that it was appropriate to issue a CIL.

RECEIVED

JUN 30 1987

IEPA-DLPC



We would also like to clarify that the report establishes that neither the chloroform or the 1,1,1, trichloroethane contamination results from any leakage from the Lagoon. The Agency has implied in its CIL that since very low concentrations of chloroform and 1,1,1, trichloroethane (5 ppb or less) were detected in the Lagoon during one sampling event (12/18/86), the Lagoon must be leaking and is therefore the source of very low concentrations of the same two compounds which have been detected in wells OMW-103 and OMW-104.

As stated in the Assessment Report, Olin does not believe that the detection of chloroform and 1,1,1, trichloroethane is the result of any activity from the Lagoon and therefore Olin does not believe that the Agency's assessment is valid. The basis for Olin's reasoning is supported by several facts concerning the Lagoon.

If leakage from the Lagoon was occurring, high concentrations of lead, copper, nickel, and zinc should be detected in the groundwater since these metals are the primary contaminants that are contained in Olin's process wastewater. The attached table of metals concentrations shows that this is not the case. In fact, many of the values are near or below detection levels. Also, out of a total of 200 inorganic groundwater samples taken since the wells were installed, only one sample has ever exceeded any of the U.S. EPA's drinking water or water quality standards; and that sample was taken from an upgradient well.

If leakage from the Lagoon was occurring, significant changes in the groundwater's pH value should be detected since the wastewater that is discharged into the Lagoon usually has a pH value equal to or greater than 9.5 or equal to or less than 5. Significant statistical or significant actual changes in the pH value of the groundwater have not been detected anytime during the entire two year history that the five wells have been monitored.

Chloroform is not used in any of Olin's manufacturing operations. Approximately one quart of chloroform per year is used at the Analytical Laboratory. Any waste chloroform generated at the lab is disposed of by combining it with other waste solvents from the Main Plant and sending the waste to an off-site solvent reclamation facility. Although 1,1,1, trichloroethane is used by Olin's manufacturing operations, waste solvents are not discharged into any part of the process wastewater sewer system which is the only pathway into the Zone 6 Wastewater Treatment Facility and also the Lagoon.

Based on the facts listed above, it is Olin's contention that the presence of the low concentrations of chloroform and 1,1,1, trichloroethane cannot be the result of leakage from the Lagoon.

Regarding a possible further effort to find the source of the two organic compounds, Olin does not feel there is sufficient justification to expend additional time and money when the concentrations found in the two downgradient wells are far below the U.S. EPA's maximum contaminant levels established for drinking water, but we are willing to consider the Agency's recommendation.

Olin wants to meet with representatives of the Illinois EPA's Springfield and Collinsville Offices to resolve the obvious differences of interpretation of the technical aspects of the Assessment Report.

We will contact you shortly so that a meeting can be set-up as soon as possible.

Very truly yours,



L. W. Maxson, Director  
Energy & Environmental Services

*WJG* 6/29/87  
WJG/sds:13/0625871  
Attachments

cc:

**CERTIFIED MAIL**

Mr. K. G. Mensing  
Southern Regional Manager  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234



EAST ALTON, ILLINOIS 62024-1174

November 24, 1986

**CERTIFIED MAIL**

Mr. Kenneth W. Liss  
Facilities Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

Re: 1190200002 - Madison County  
E. Alton/Olin Corporation Main Plant  
ILD006271696 Subpart F

Dear Mr. Liss:

This is in response to your letter, dated November 6, 1986, concerning groundwater assessment for the Emergency Holding Lagoon at Olin's Zone 6 Wastewater Treatment Facility.

In accordance with your letter and the discussions held at Olin on November 19, 1986, quarterly monitoring will be initiated for groundwater monitoring of well No. OMW-103. The quarterly monitoring will begin at the next semi-annual sampling of the wells which is tentatively set for December 18 - 19, 1986. The quarterly monitoring for well No. OMW-103 will continue until two consecutive samples show the presence or absence of the two organic compounds chloroform and 1,1,1, trichloroethane. It is our understanding that the scope of further assessment actions will be reevaluated at that time.

We are planning for the Agency to be present when the sampling is conducted and that the groundwater samples for each well will be split with the Agency so that independent analyses can be performed. Olin also intends to split the well No. OMW-103 samples for the two organic chemicals between two laboratories.

Olin will notify you of any changes in the December, 1986 sampling schedule.

We understand that you prefer to reserve your questions regarding the hydrologic conditions (item 2 of your 11/6/86 letter) until results of the quarterly monitoring are received.

If you have any questions, or if any of the above is unacceptable to the Agency, please advise. Otherwise, Olin will proceed as planned.

Very truly yours,



L. W. Maxson, Director  
Energy & Environmental Services

WJH  
JG/sds:13/1120863  
11/21/86

CERTIFIED MAIL

cc: Mr. Chuck Reeter  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234





217/782-6761

Refer to: 1190200002 -- Madison County  
East Alton/Olin Corp. - Main Plant  
ILD006271696  
Compliance File

December 17, 1986

**RECEIVED**

**DEC 18 1986**

**L. W. MAXSON**

*M  
12-18*

Mr. L.W. Maxson, Director  
Energy and Environmental Services  
Olin Corporation  
Shamrock Street  
East Alton, Illinois 62024-1174

Dear Mr. Maxson:

On November 19, 1986 your facility was inspected by Chuck Reeter and Kenn Liss of the Illinois Environmental Protection Agency. The purpose of this inspection was to determine your facility's compliance with 35 Illinois Administrative Code, Part 725, Subpart(s) F. At the time of the inspection, no apparent violations of the requirements addressed as part of the inspection were observed.

For your information a copy of the inspection report is enclosed. Should you have any questions regarding the inspection, please contact Chuck Reeter at 618/345-4606.

Sincerely,

Harry A. Chappel, P.E., Acting Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control

HAC:BF:ba/1038g/12

Enclosure

cc: Division File  
Southern Region  
Bruce Carlson  
Chuck Reeter  
Kenn Liss  
Bur Filson  
USEPA - Region V

APPENDIX A-4

COMMENTS

On November 19, 1986 an annual Subpart F Groundwater Monitoring Inspection was conducted at the Olin Corporation - Main Plant facility. Chuck Reeter and Kenn Liss of the Illinois EPA interviewed Mike Roarke and Wayne Galler of the Olin Corporation during the inspection.

Olin is currently trying to identify the source of origination of the organic contamination found in Well OMW-103. Apparently, there are no organic constituents listed for the hazardous waste stored in the surface impoundment, for which the groundwater monitoring network was established.

Olin will implement the first quarter assessment monitoring of Well OMW-103 in December, 1986 for chloroform and 1,1,1, trichloroethane. These contaminants were found in previous samplings by both the IEPA and Olin sampling contractors.

Rate and extent of contamination will be determined at a later date, when assessment data has been collected. Additional groundwater monitoring wells or soil borings may be required, depending upon results of initial assessment monitoring.

CVR:jlr

MH:sd/sp/7321c/1-11

OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTONH, IL. 62024

ZONE 6 EMERGENCY HOLDING LAGOON  
GROUNDWATER DATA - METALS CONCENTRATIONS

SELENIUM (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	<1	<1	<1	<1	<1
dec-19-84	<4	<10	<8	<5	<9
mar-19-85	<1	<1	<1	<1	<1
jun-19-85	7	7	<5	<5	<5
aug-23-85	-	-	2	-	-
apr-3-86	-	-	-	-	-
mar-6-87	-	-	-	-	-

MERCURY (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	<2	<2	<2	<2	<2
dec-19-84	.4	.4	.3	.3	<.2
mar-19-85	.6	.6	.5	.7	.6
jun-19-85	<.2	<.2	<.2	<.2	<.2
aug-23-85	-	-	.06	-	-
apr-3-86	-	-	-	-	-
mar-6-87	-	-	-	-	-

CYANIDE (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	-	-	-	-	-
dec-19-84	-	-	-	-	-
mar-19-85	-	-	-	-	-
jun-19-85	-	-	-	-	-
aug-23-85	-	-	<5	<5	<5
apr-3-86	3	3	1	1	<1
mar-6-87	13	9	14	7	47

OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTONH, IL. 62024

ZONE 6 EMERGENCY HOLDING LAGOON  
GROUNDWATER DATA - METALS CONCENTRATIONS

NICKEL (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	-	-	-	-	-
dec-19-84	-	-	-	-	-
mar-19-85	-	-	-	-	-
jun-19-85	-	-	-	-	-
aug-23-85	-	75	71	58	69
apr-3-86	70	120	70	120	90
mar-6-87	<50	<50	<50	<50	<50

SILVER (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	1	2	3	2	<1
dec-19-84	1	2	<1	<1	<1
mar-19-85	<1	<1	<1	<1	<1
jun-19-85	<1	<1	<1	<1	<1
aug-23-85	-	<5	<5	<5	<5
apr-3-86	-	-	-	-	-
mar-6-87	-	-	-	-	-

ZINC (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	-	-	-	-	-
dec-19-84	-	-	-	-	-
mar-19-85	-	-	-	-	-
jun-19-85	-	-	-	-	-
aug-23-85	-	<50	<50	<50	140
apr-3-86	47	56	53	58	89
mar-6-87	47	38	43	14	78

OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTONH, IL. 62024

ZONE 6 EMERGENCY HOLDING LAGOON  
GROUNDWATER DATA - METALS CONCENTRATIONS

CADMIUM (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	2	3	3	2	3
dec-19-84	6	4	5	4	5
mar-19-85	<1	6	5	6	4
jun-19-85	2	5	3	1	3
aug-23-85	-	<5	<5	<5	<5
apr-3-86	7	10	6	<1	5
mar-6-87	<5	<5	<5	<5	<5

CHROMIUM (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	5	8	4	5	6
dec-19-84	3	5	1	2	4
mar-19-85	4	7	6	6	2
jun-19-85	11	14	3	12	7
aug-23-85	-	<10	<10	<10	<10
apr-3-86	5	6	<5	7	<5
mar-6-87	-	-	-	-	-

LEAD (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	13	40	2	88	4
dec-19-84	<5	13	9	19	30
mar-19-85	<5	<5	5	9	13
jun-19-85	9	6	<5	<5	<5
aug-23-85	-	<50	<50	<50	50
apr-3-86	<5	<5	<5	<5	<5
mar-6-87	<5	<5	9	<5	8

OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTONH, IL. 62024 .

ZONE 6 EMERGENCY HOLDING LAGOON  
GROUNDWATER DATA - METALS CONCENTRATIONS

COPPER (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	-	-	-	-	-
dec-19-84	-	-	-	-	-
mar-19-85	-	-	-	-	-
jun-19-85	-	-	-	-	-
aug-23-85	-	<20	<20	<20	23
apr-3-86	21	27	66	33	199
mar-6-87	166	465	913	15	15

ARSENIC (PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	<10	<10	<10	<10	<10
dec-19-84	<5	<5	<5	<5	<5
mar-19-85	<5	<5	<5	<5	<5
jun-19-85	<5	<5	<5	6	<5
aug-23-85	-	<1	<1	<1	<1
apr-3-86	-	-	-	-	-
mar-6-87	-	-	-	-	-

BARIUM(PPB)	WELL #				
=====	102	103	104	105	106
sep-19-84	80	130	180	140	120
dec-19-84	84	106	230	128	235
mar-19-85	60	83	106	98	137
jun-19-85	49	69	90	77	94
aug-23-85	-	190	190	130	240
apr-3-86	-	-	-	-	-
mar-6-87	-	-	-	-	-



EAST ALTON, ILLINOIS 62024-1174

April 24, 1987

*dent  
4-24-87  
DDE*

**CERTIFIED MAIL**

Harry Chappel, P.E., Acting Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
Post Office Box 19276  
Springfield, Illinois 62794-9276

Dear Mr. Chappel:

This is to confirm a telephone conversation on April 21, 1987 conducted between Mr. Ken Liss of your staff and Wayne Galler of Olin regarding Olin's Groundwater Quality Assessment Report for its Emergency Holding Lagoon at the Main Plant Facility.

During the conversation, Olin requested Mr. Liss to extend the deadline for submittal of the report to the Agency from May 1, 1987 to May 15, 1987. Olin requested the extension in order to recalculate the statistics performed upon all of the groundwater sample results since the installation of the wells and to conduct a thorough analysis of this data for submittal with the assessment report. The statistical results must be recalculated because of two mathematical errors that were detected in the equation used to determine the "t-statistic" value published in the U.S. EPA's Draft Groundwater Monitoring Technical Enforcement Guidance Document.

Mr. Liss agreed to give Olin the two week extension for submittal of its Groundwater Quality Assessment Report.

Please contact me if your understanding of the extension does not agree with Olin's.

Very truly yours

L. W. Maxson, Director,  
Energy & Environmental Services

WJG/jal:13/0421871

*WJG  
4/22/87  
4/23/87*



EAST ALTON, ILLINOIS 62024-1174

February 16, 1987

**CERTIFIED MAIL**

Mr. Richard J. Carlson, Director  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Re: LPC 1190200002 Madison County - E. Alton  
Olin Corporation Main Plant Facility  
ILD006271696

Dear Sir:

In accordance with Title 35, Subtitle G, Waste Disposal, Section 725.193(d)(1) of the State of Illinois Rules and Regulations, Olin Corporation is hereby notifying the Agency that its Zone 6 Wastewater Treatment Facility Emergency Holding Lagoon may be affecting groundwater quality. The basis for this notification is explained below.

On December 18, 1986, Olin conducted its third semi-annual sampling of the five groundwater monitoring wells that surround the Lagoon as required by Section 725.192 (d)(2). The results of the analyses performed upon the groundwater samples indicated these facts:

- 1) The comparisons (December 18, 1986 results versus background results) for the two upgradient wells, identified as OMW-105 and OMW-106, showed no statistically significant changes for any of the indicator parameters.
- 2) The comparisons for two of the three downgradient wells, which are identified as OMW-103 and OMW-104, showed a statistically significant decrease for the pH value.

On February 10, 1986, Olin obtained additional groundwater samples for well numbers OMW-103 and OMW-104. The samples were split in two and analyzed immediately on-site by Olin and by Environmental Analysis, Inc. of St. Louis, MO.

After the pH values were obtained, Olin performed statistical analyses using the Averaged Replicate t-test upon the results which are attached to this letter as Tables I and II.

A review of the results confirms the statistically significant decrease of the pH values for both monitoring wells.

RECEIVED  
FEB 18 1987  
IEPA



Since these results confirm the significant decrease, Section 725.193(d)(2) of the Agency's rules require Olin to develop and submit to the Director, a specific plan, based on the groundwater quality assessment program outline, within 15 days of this notification.

Olin will develop a specific plan in accordance with Section 725.193(a) of the rules and submit it to the Director within 15 days of this notification.

If you have any questions regarding the enclosed analyses or this letter, please contact M. L. Roark at (618) 258-3039.

Very truly yours,



L. W. Maxson, Director  
Energy & Environmental Services

Attachment

WJG/jal:13/0211877

cc:

**CERTIFIED MAIL**

Mr. K.G. Mensing  
Southern Regional Manager  
Field Operations Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

Mr. L. W. Eastep, Manager  
Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

**Mr. Kenn Liss**

Compliance Monitoring Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

RECEIVED  
FEB 18 1987  
IEPA-DLPC

TABLE I

OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTON, IL. 62024

STATISTICAL ANALYSES FOR  
ZONE 6 WWTF EMERGENCY HOLDING LAGOON  
OLIN GROUNDWATER MONITORING WELL # OMW-103

<u>TIME PERIOD OF SAMPLING</u>	<u>pH OLIN</u>	<u>pH EA</u>
Feb. 10, 1987		
	6.8	6.5
	6.8	6.6
	6.9	6.6
	7.1	6.6
TOTALS	27.5	26.3
MEAN	6.9	6.6
BACKGROUND MEAN	6.4	6.4
BACKGROUND VARIANCE	0.04	0.04
T-STATISTIC	13.4	5.3
COMPARISON T-STATISTIC	3.5	3.5

$CV = 29\%$

$CV = 0.76\%$

$6.9 = \bar{X}$

$6.575 = \bar{X}$

$S = 0.1414$

$S = 0.05$

$S^2 = 0.02$

$S^2 = 0.0025$

$2.947$

NOTES: BACKGROUND VALUES CALCULATED FROM UPSTREAM WELL NUMBERS OMW-105 AND OMW-106. CRITICAL T-VALUES FOR PH CALCULATED USING 0.005 LEVEL OF SIGNIFICANCE.

EA STANDS FOR ENVIRONMENTAL ANALYSIS, INC.

13/0211878

TABLE II

OLIN CORPORATION  
MAIN PLANT FACILITY  
E. ALTON, IL. 62024

STATISTICAL ANALYSES FOR  
ZONE 6 WWTF EMERGENCY HOLDING LAGOON  
OLIN GROUNDWATER MONITORING WELL # OMW-104

<u>TIME PERIOD OF SAMPLING</u>	<u>pH OLIN</u>	<u>pH EA</u>
Feb. 10, 1987		
	7.1	6.7
	7.1	6.8
	7.2	6.8
	7.3	6.8
TOTALS	28.8	27.1
MEAN	7.2 $2.175 = \bar{x} = 6.775$	6.8
BACKGROUND MEAN	6.4 $0.0957 = s^2 = 0.05$	6.4
BACKGROUND VARIANCE	0.04 $0.009 \cdot 5^2 = 0.0025$	0.04
T-STATISTIC	21.4	10.7
COMPARISON T-STATISTIC	3.5	3.5

NOTES: BACKGROUND VALUES CALCULATED FROM UPSTREAM WELL NUMBERS OMW-105 AND OMW-106. CRITICAL T-VALUES FOR PH CALCULATED USING 0.005 LEVEL OF SIGNIFICANCE.

EA STANDS FOR ENVIRONMENTAL ANALYSIS, INC.

13/0211879

RECEIVED

FEB 18 1987

IEPA-DLPC



EAST ALTON, ILLINOIS 62024-9988

Waste?

CERTIFIED MAIL

October 1, 1986

Mr. Mark A. Haney, Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
Springfield, IL 62706

Dear Sir:

Re: 1190200002 - Madison County  
Olin Corporation - Main Plant  
ILD006271696

Please find enclosed the results of analyses for chloroform and 1,1,1, trichloroethane conducted on groundwater samples taken from the monitoring wells that surround Olin's Zone 6 WWTF Emergency Holding Lagoon.

These analyses were conducted to comply with the Agency's request of March 21, 1986 concerning the Groundwater Quality Assessment Plan for the Lagoon.

Based on the results of these analyses and the Assessment Report (submitted July 11, 1986), it is Olin's determination that no hazardous waste or hazardous waste constituents from the Lagoon have entered the groundwater.

Because of this determination, Olin plans to reinstate the indicator evaluation program for the Lagoon.

If you have any questions regarding this submittal, please contact M. L. Roark at (618) 258-3039.

Very truly yours,

L. W. Maxson, Director  
Energy & Environmental Services

HJC/sds:13/929861

CERTIFIED MAIL

CC: Mr. K. G. Mensing  
Southern Regional Manager  
Field Operations Section  
Div. of Land Pollution Control  
Illinois E.P.A.  
2009 Mall Street  
Collinsville IL 62234

Mr. L. W. Eastep, Manager  
Permit Section  
Div. of Land Pollution Control  
Illinois E.P.A.  
2200 Churchill Road  
Springfield, IL 62706

O L I N C O R P O R A T I O N

RECEIVED

OCT - 3 1986

IEPA-DLPC

# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



MR. WAYNE GALLER  
OLIN CORPORATION  
BRASS DIVISION  
E & E ENGINEERING  
EAST ALTON IL 62024

PAGE NO : 1  
REPORT NO : 22643  
DATE : 09/24/86  
P.O. No. : SO 11135 B

## REPORT OF ANALYSIS

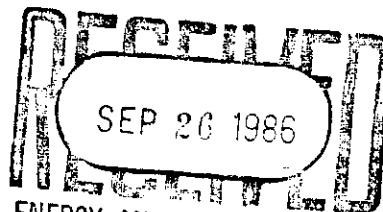
SUBJECT : Analysis of waste samples in accordance with SW-84  
6: Test Methods for Evaluating Solid Waste - Physi-  
cal/Chemical Methods, 1982; where applicable.

### LOG NUMBER

711428  
711429  
711431  
711432  
711433  
711430

### SAMPLE DESCRIPTION

MON WELL SAMP 8/13  
OMW#102 8/13/86  
OMW#104 8/13/86  
OMW#105 8/13/86  
OMW#106 8/13/86  
OMW#103 8/13/86



ENERGY AND ENVIRONMENTAL  
ENGINEERING DEPARTMENT

RESULTS OF ANALYSIS APPEAR ON FOLLOWING PAGES

RESPECTFULLY SUBMITTED

R. M. FERRIS

RECEIVED

OCT - 3 1986



# Environmental Analysis, Inc.

3278 N. Lindbergh Blvd. • Florissant, MO 63033 • 314-921-4488



OLIN CORPORATION

PAGE NO : 2  
REPORT NO : 22643  
DATE : 09/24/86

## RESULTS OF ANALYSIS

LOG NUMBER	SAMPLE DESCRIPTION	TEST NAME	RESULTS OF ANALYSIS	UNITS OF EXPRESSION
711428	MON WELL SAMP 8/13	Sampling Charges	15	man-hr
711429	OMW#102 8/13/86	Chloroform	<1	ppb
		Gas Chromatog. Prep.	1	
		Trichloroethane(111)	<1	ppb
711430	OMW#103 8/13/86	Chloroform	12	ppb
		Gas Chromatog. Prep.	1	
		Trichloroethane(111)	8	ppb
711431	OMW#104 8/13/86	Chloroform	<1	ppb
		Gas Chromatog. Prep.	1	
		Trichloroethane(111)	<1	ppb
711432	OMW#105 8/13/86	Chloroform	<1	ppb
		Gas Chromatog. Prep.	1	
		Trichloroethane(111)	<1	ppb
711433	OMW#106 8/13/86	Chloroform	1	ppb
		Gas Chromatog. Prep.	1	
		Trichloroethane(111)	<1	ppb

RECEIVED  
OCT - 3 1986  
IEPA-DLPC





EAST ALTON, ILLINOIS 62024-1174

November 24, 1986

**CERTIFIED MAIL**

Mr. Kenneth W. Liss  
Facilities Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

Re: 1190200002 - Madison County  
E. Alton/Olin Corporation Main Plant  
ILD006271696 Subpart F

Dear Mr. Liss:

This is in response to your letter, dated November 6, 1986, concerning groundwater assessment for the Emergency Holding Lagoon at Olin's Zone 6 Wastewater Treatment Facility.

In accordance with your letter and the discussions held at Olin on November 19, 1986, quarterly monitoring will be initiated for groundwater monitoring of well No. OMW-103. The quarterly monitoring will begin at the next semi-annual sampling of the wells which is tentatively set for December 18 - 19, 1986. The quarterly monitoring for well No. OMW-103 will continue until two consecutive samples show the presence or absence of the two organic compounds chloroform and 1,1,1, trichloroethane. It is our understanding that the scope of further assessment actions will be reevaluated at that time.

We are planning for the Agency to be present when the sampling is conducted and that the groundwater samples for each well will be split with the Agency so that independent analyses can be performed. Olin also intends to split the well No. OMW-103 samples for the two organic chemicals between two laboratories.

Olin will notify you of any changes in the December, 1986 sampling schedule.

We understand that you prefer to reserve your questions regarding the hydrologic conditions (item 2 of your 11/6/86 letter) until results of the quarterly monitoring are received.

RECEIVED

NOV 25 1986

DLPC

If you have any questions, or if any of the above is unacceptable to the Agency, please advise. Otherwise, Olin will proceed as planned.

Very truly yours,



L. W. Maxson, Director  
Energy & Environmental Services

WJG/sds:13/1120863  
11/21/86

**CERTIFIED MAIL**

cc: Mr. Chuck Reeter

Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

RECEIVED  
NOV 25 1986





217/782-6761

Refer to: 1190200002 -- Madison County  
East Alton/Olin Corporation - Main Plant  
ILD006271696  
Subpart F

November 6, 1986

L. W. Maxson, Director  
Energy and Environmental Services  
Olin Corporation  
Shamrock Street  
East Alton, IL 62024

Dear Mr. Maxson:

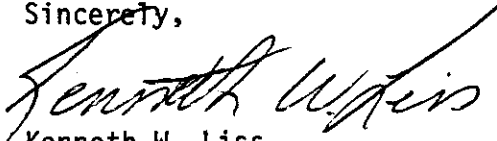
The Agency has received your correspondence dated October 1, 1986 listing the analytical results for monitoring wells G102 through G106. This information was requested in the Agency's March 21, 1986 letter and completes the first phase of the assessment for wells G103 and G104. Subsequent to a review of that report, the following comments and recommendations are made:

1. As mentioned in your report, the Agency detected 16 ppb chloroform and 9 ppb 1,1,1-trichloroethane in samples from well G103, which were collected by Chuck Reeter (IEPA) on August 22, 1986. Olin's August 13, 1986 sampling detected the same compounds in almost identical concentrations in well G103, which verifies the presence and persistence of these compounds in the groundwater. Therefore, the Agency requests that Olin implement further assessment actions to satisfy the requirements of Section 725.193(d)(4) and (d)(7) for well G103.
2. The Agency is unfamiliar with the term "groundwater trough" which is used to describe the hydrologic conditions beneath the regulated unit. In order to determine localized effects on the groundwater table and accurately characterize flow patterns, additional piezometers should be installed in the general area.

In response to your August 18, 1986 correspondence notifying the Agency of statistically significant differences in wells G103 and G104, the Agency requests that well G103 remain in assessment as indicated above.

If you have any questions, please contact me at 217/782-9890.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kenneth W. Liss".

Kenneth W. Liss  
Facilities Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control

KWL:tk:2/11/9

cc: Division File  
Permit Section  
Chuck Reeter  
Southern Region  
Compliance Correspondence Log (A)



RESPONSE TO 2/10/86 CIL. ✓

EAST ALTON, ILLINOIS 62024-9988

July 14, 1986

**CERTIFIED MAIL**

Mr. Mark A. Haney, Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

RECEIVED  
JUL 16 1986  
IEPA-DLPC

Dear Sir:

Re: 1190200002 - Madison County  
Olin Corporation - Main Plant  
ILD006271696

This is in response to your Compliance Inquiry Letter, dated July 10, 1986, regarding Olin Corporation's Groundwater Assessment Report for its Zone 6 WWTF Emergency Holding Lagoon.

Olin mailed the Assessment Report to the Agency on July 11, 1986.

If you have any questions, please call.

Very truly yours,

L. W. Maxson, Director  
Energy & Environmental Services

WJG/sds:13/711863

**CERTIFIED MAIL**

cc: Mr. K.G. Mensing  
Southern Regional Manager  
Field Operations Section  
Div. of Land Pollution Control  
Illinois E.P.A.  
2009 Mall Street  
Collinsville, IL 62234

Mr. L.W. Eastep, Manager  
Permit Section  
Div. of Land Pollution Control  
Illinois E.P.A.  
2200 Churchill Road  
Springfield, IL 62706

Mr. Ken Liss  
Compliance Monitoring Section  
Div. of Land Pollution Control  
Illinois E.P.A. Agency  
2200 Churchill Road  
Springfield, IL 62706

O L I N C O R P O R A T I O N

CERTIFIED

P 063 925 868

MAIL

Olin

EAST ALTON, ILLINOIS 62024-9988

CERTIFIED MAIL

Mr. Richard J. Carlson, Director  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Re: LPC 1190200002 Madison County - E. Alton  
Olin Corporation Main Plant Facility  
ILD 006271696

Dear Sir:

In accordance with Title 35, Subtitle G, Waste Disposal, Section 725.193(d)(5) of the State of Illinois Rules and Regulations, Olin Corporation is hereby submitting a groundwater quality assessment report for its Zone 6 WWTF Emergency Holding Lagoon.

The report was prepared by John Mathes & Associates, Inc., (JMA) a geotechnical consulting firm located in Columbia, Illinois.

Based on the results of the assessment report, both Olin and JMA have determined that no hazardous waste or hazardous waste constituents from the Lagoon have entered the groundwater.

Because of this determination, Olin plans to reinstate the indicator evaluation program for the Lagoon.

If you have any questions regarding the enclosed report or this letter, please contact M.L. Roark at (618) 258-3039.

Very truly yours,



L.W. Maxson, Director  
Energy & Environmental Services

Attachments  
WJC/sds:13/80

WJC  
7/9/86

RECEIVED

JUL 14 1986

IEPA-DLPC

O L I N C O R P O R A T I O N

cc:

**CERTIFIED MAIL**

Mr. K.G. Mensing  
Southern Regional Manager  
Field Operations Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

Mr. L.W. Eastep, Manager  
Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

Mr. Ken Liss  
Compliance Monitoring Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

RECEIVED

JUL 14 1986

IEPA-DLPC



EAST ALTON, ILLINOIS 62024-9988

June 24, 1986

CERTIFIED MAIL

Mr. Ken Liss  
Compliance Monitoring Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

JUN 27 1986

IEPA-DLPC

Dear Mr. Liss:

This is to confirm your telephone conversation of June 23, 1986, with Wayne Galler of Olin, in which you agreed to extend the date for receipt of the Assessment Report for Olin's Zone 6 WWTF Emergency Holding Lagoon until July 3, 1986.

Thank you for your cooperation in this matter.

Very truly yours,

L. W. Maxson, Director  
Energy & Environmental Services

WJC/sds:13/624861

WJC  
6/24/86

cc: Certified Mail

Mr. K. G. Mensing  
Southern Regional Manager  
Field Operations Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

Mr. L. W. Eastep, Manager  
Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706



217/782-6761

Refer to: 1190200002 -- Madison County  
East Alton/Olin Corporation - Main Plant  
ILD006271696

March 21, 1986

CERTIFIED # P594558659

L. W. Maxson, Director  
Energy and Environmental Services  
Olin Corporation  
Shamrock Street  
East Alton, IL 62024

Dear Mr. Maxson:

The Agency has received the "Groundwater Quality Assessment Plan" for Olin's Zone 6 Treatment Facility. The following comments and recommendations are made with respect to the plan.

1. The Agency recommends that the electronic water level indicator be employed in determining water measurements at each well. This instrument enables a direct reading from the graduated cable, which is less susceptible to human error than the weighted tape method.
2. Olin proposes to sample wells G101 through G106 for the parameters listed on Table 4. The Agency requests that chloroform and 1,1,1-trichloroethane be added to that list for downgradient well G103 and the two (2) upgradient wells G105 and G106. These compounds were detected by the Agency in samples taken August 23, 1985 from your facility.
3. Specific Conductance and pH measurements must be taken in the field at the well head. All instruments utilized for determining these values must be properly cleaned and calibrated at the site to ensure accurate and representative readings.
4. A trend analysis should be performed for the quality and indicator parameters associated with the facility activities. This information should be correlated with monthly precipitation records, stream gauge measurements (East Fork Wood River and remnant stream bed), and pond usage. A determination can then be made on the effect these events may have on the groundwater quality.

The assessment plan should be implemented immediately and the first quarter results reported to this office ninety (90) days from receipt of this letter. No response to this letter is necessary if the above comments are incorporated into the assessment plan.

If you have any questions, please feel free to call me at 217/782-9890.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kenneth W. Liss".

Kenneth W. Liss  
Facilities Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control

KWL:tk:2/6/34

cc: Compliance Correspondence Log (A)  
Mark Haney  
Division File



Fed. <sup>35</sup>



EAST ALTON, ILLINOIS 62024

March 11, 1986

CERTIFIED MAIL

RECEIVED  
MAR 13 1986  
EPA-DLPC

Mr. Richard J. Carlson, Director  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Re: LPC 1190200002 Madison County - E. Alton  
Olin Corporation Main Plant Facility  
ILD 006271696

Dear Sir:

Please find enclosed page 13 of the "Groundwater Quality Assessment Plan" for Olin's Zone 6 Wastewater Treatment Facility Emergency Holding Lagoon.

As stated in the original submittal of this Plan, page 13 was being revised and was therefore not ready for mailing on March 7, 1986.

Please incorporate page 13 into your copy of the Plan.

If you have any questions regarding this letter please contact M.L. Roark at (618) 258-3039.

Very truly yours,

L.W. Maxson, Director  
Energy & Environmental Services

Attachments  
WJG/tey:13/101  
WJG 3/11/86

cc:

CERTIFIED MAIL

Mr. K.G. Mensing  
Southern Regional Manager  
Field Operations Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

Mr. L.W. Eastep, Manager  
Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Mr. Ken Liss  
Compliance Monitoring Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

RECEIVED  
MAR 13 1986  
TPA-DLPC

have changed to a more westerly direction. Data indicate, however, that a gradient reversal has not occurred.

- 7) Available groundwater level data indicate the water level gradient beneath the lagoon has remained fairly constant since August 1984. The water level at the up-gradient well G106 has apparently, however, been higher. Since well G106 is closest to the river, the measured elevated groundwater levels probably reflect high-water conditions in the East Fork - Wood River stream channel at the site.
- 8) According to Olin Corporation personnel, the Emergency Holding Lagoon was only used a total of 44 days during 1985.



RECEIVED  
MAR 13 1986  
EPA-DLPC



EAST ALTON, ILLINOIS 62024

March 7, 1986

*Sent 3-7-86  
JEF*

CERTIFIED MAIL

Mr. Richard J. Carlson, Director  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Re: LPC 1190200002 Madison County - E. Alton  
Olin Corporation Main Plant Facility  
ILD 006271696

Dear Sir:

In accordance with Title 35, Subtitle G, Waste Disposal, Section 725.193(d)(2) of the State of Illinois Rules and Regulations, Olin Corporation is hereby submitting to the Agency a "Groundwater Quality Assessment Plan" for its Zone 6 Wastewater Treatment Plant Emergency Holding Lagoon.

This plan was prepared by John Mathes & Associates, Inc. of Columbia, Illinois, and is based on the outline (also prepared by JMA) originally submitted to the Agency on August 24, 1984.

Page 13 of the attached plan has been removed and is being revised. A new page will be sent to you as soon as it is available.

Olin is prepared to implement this plan within two weeks after the Agency's approval.

If you have any questions regarding this letter please contact M.L. Roark at (618) 258-3039.

Very truly yours,

L.W. Maxson, Director  
Energy & Environmental Services

Attachments  
WJG/tey:13/101

*WJG*  
*3/7/86*

bcc: N.C. Gladding  
R.E. Mooshegian  
File (WJG)

Route: M.L. Roark  
M.F. Redington  
L.W. Maxson  
W.J. Galler



EAST ALTON, ILLINOIS 62024

March 10, 1986

CERTIFIED MAIL

RECEIVED

MAR 17 1986

SOLID WASTE DIVISION  
U.S. EPA, REGION V

Mr. Lawrence W. Eastep  
Manager, Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Dear Mr. Eastep:

Thank you for your letter of February 28, 1986 regarding Olin's proposal to reclassify its Zone 6 Wastewater Treatment Facility (WWTF) sludge. We appreciate the priority which both the IEPA and the USEPA gave to this matter. We also would like to especially thank Ms. Kissinger for the time and effort she put forth on this project.

Based on your letter of the 28th, we are proceeding with design of a new wastewater treatment unit exclusively for listed hazardous wastewater treatment. This unit has commonly been referred to in previous correspondence as the "proposed Zone 4 wastewater treatment facility".

In the course of conducting preliminary engineering, economic evaluations, and in light of input from the Agency, the system we are now proposing differs from that which was originally presented in our proposal given to the Agency on December 12, 1985.

Because of the complex nature of the issues involved and the significant capital expenditures Olin will be making we want to be sure we have correctly interpreted the Agency's opinion. For this reason, we are providing an overview of how we plan to proceed to obtain successful reclassification of our Zone 6 WWTF sludge.

Following is a brief capsule summary of Olin's plan of action in this reclassification issue. Should any of the following not agree with IEPA or USEPA intent or opinion we would appreciate being advised of this as soon as possible:

1. It is Olin's understanding that the Agency's approval of the Zone 6 WWTF sludge reclassification is contingent upon all wastewater effluent discharges from each of the explosives kill sumps (Sites 1-3, 1-4, 1-5, 1-6, 4-2e, 4-4 & 4-5); cyanide destruct unit (part of Site 1-1); chromate reduction unit (Site 1-7); and nickel plating line (no Site number) being removed from the Zone 6 WWTF influent for separate treatment.

189-68

To accomplish this, Olin intends to construct a new neutralization/precipitation wastewater treatment unit. An economic evaluation has shown the most cost effective location for this unit to be inside the existing wastewater treatment facility building in Zone 6.

The new wastewater treatment unit will be self contained with both the influent and dewatered sludge isolated from the current wastewater treatment system at Zone 6.

A new force main will be installed to pipe influent wastewater from Zone 4 and Zone 1 to the new treatment unit in Zone 6. A new sludge dewatering press will be located in Zone 6. Sludge generated from this press which is totally isolated from the normal Zone 6 WWTF sludge will be handled as a listed hazardous waste.

Effluent from the new treatment unit will be piped to the downstream side of the current Zone 6 WWTF. Both the new treatment unit effluent and existing Zone 6 WWTF effluent will discharge to the Wood River through the existing permitted NPDES outfall (015/006).

2. Olin will divert all continuous overflow and batch "killed" slurry at the explosives sumps from the Zone 6 WWTF influent to the new wastewater treatment unit. We intend to submit a closure plan under 35 IAC 725 Subpart G for the "kill" sumps as well as request amendment of our Part B application to reflect reclassification of these sumps as wastewater treatment units under 35 IAC 725.110 and thus exempt from permitting under 35 IAC 725.101(c)(10) and 724.101(f)(6).
3. Olin will intercept all flow from the cyanide destruct unit and pipe the wastewater to the new wastewater treatment unit. We will then submit a closure plan under 35 IAC 725 Subpart G and request amendment of our Part B application to reflect reclassification of the cyanide destruct unit as a wastewater treatment unit under 35 IAC 725.110 and thus exempt from permitting under 35 IAC 725.101(c)(10) and 724.101(f)(6).

After the cyanide unit wastewater is diverted, the settling pit at Site 1-1 will continue to discharge to the Zone 6 WWTF. Since the pit will then only be receiving wastewater which is not a listed hazardous waste from the acid pre-cleaning side of the copper plating facility, we will also submit a closure plan under 35 IAC 725 Subpart G and request amendment of our Part B application to remove the pit.



4. The chromate reduction unit and nickel plating line wastewater discharges will also be diverted from the current Zone 6 WWTF influent. We intend to submit a closure plan under 35 IAC 725 Subpart G and Part B amendments to reflect reclassification of the chromate reduction unit as a wastewater treatment unit under 35 IAC 725.110 and thus exempt from permitting under 35 IAC 725.101(c)(10) and 724.101(f)(6).
5. As soon as preliminary final design of the wastewater system changes and treatment unit are complete we will apply to the Agency for "Authorization to Construct" in accordance with 35 IAC 709.154.

It is our understanding that the new wastewater treatment unit would be regulated as a wastewater treatment unit under 35 IAC 725.110 and thus exempt from permitting under 35 IAC 725.101(c)(10) and 724.101(f)(6).

As indicated previously, we believe the above actions meet the Agency's requirements to reclassify the Zone 6 WWTF sludge in an economically justifiable manner.

Since we are proceeding with system designs in accordance with the above interpretations, it is imperative that we know that our approach meets with Agency intent as soon as possible.

Should you need to discuss anything further contact Mike Roark at (618) 258-3039. Otherwise we will appreciate a prompt letter from the Agency concurring with our intended approach.

Once again thank you for your help in this matter.

Very truly yours,



L.W. Maxson, Director  
Energy & Environmental Services

cc: Mr. Tim Kluge  
Manager, Permit Section  
Water Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

Mr. James Mayka  
Illinois Unit Chief  
Technical Permit Section  
U.S. Environmental Protection Agency  
230 S. Dearborn St.  
Chicago, IL 60604

*MLR*  
3/2/86 MLR/tey:11/30



EAST ALTON, ILLINOIS 62024

January 29, 1986

**CERTIFIED MAIL**

Ms. Linda Kissinger  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, IL 62706

Dear Ms. Kissinger:

Per your request of 1/27/86, we are providing the following discussion regarding destination of solids from each of the sources initially described in Olin's proposed reclassification of its Zone 6 WWTF Sludge first presented to the IEPA on 12/12/85.

**Site 1-1 Bullet Plating Facility**

This process consists of electroplating operations where steel and lead components of small arms ammunition are copper plated. Wastewater containing copper or sodium cyanide is discharged into a "cyanide destruct tank" where the cyanides are chemically oxidized to cyanate. The treated wastewater from the destruct tank plus non-cyanide containing rinse water discharges into an in-ground sump. The sump is so designed that solids settle to the bottom by gravity while the supernatant overflows to the Zone 6 WWTF.

Once a year, the accumulated solids are removed from the settling tank by vacuum truck and disposed of at an off-site treatment facility which treats all other cyanide contaminated wastes which Olin generates.

Olin currently has an NPDES permit renewal pending. The draft permit will establish the discharge from this plating operation as a specific outfall with periodic monitoring of cyanide. The draft permit will allow a discharge of 0.28 lbs/day of cyanide from this source.

**Site 1-7 Central Machine Shop Chromate Reduction Unit**

The treatment process at this site consists of the addition of sulfuric acid and sodium metabisulfate to chemically reduce hexavalent chromium to trivalent chromium. Caustic is then added to raise the pH to prevent damage to the sewer system. No solids would be expected to be generated from this process. Olin does, however, completely drain the treatment tank once a year and swab out any residual solids in the bottom of the tank. The following data is provided in support of the contention that negligible solids are discharged from this process. Analysis of Zone 6 WWTF sludge has shown that chromium levels are consistently less than 2.5 ppm and EP Toxicity levels of chromium are less than 0.1 ppm. Based on the normal pounds of sludge generated daily, the amount of chromium generated would be less than 0.1 lb/day. Olin's draft NPDES



13

permit will allow 10.4 pounds per day maximum and 4.9 pounds per day average of total chromium discharge from the Zone 6 WWTF outfall. Olin has operations other than the subject chrome plating facility which have allowable discharges of chromium into the wastewater under the 40 CFR Part 468 Copper Forming Point Source Category and the 40 CFR Part 433 Metal Finishing Point Source Category.

#### Nickel Plating Operation

In this process nickel is plated onto brass and copper ammunition casings and primers. The process consists of a trisodium phosphate clean, sulfuric acid surface preparation, flash coating with nickel and rinse. The plating process is basically a batch operation with the only discharge of wastewater being a small overflow from the rinse tank. The water discharge from this operation is an insignificant 0.08 percent of average influent into the Zone 6 WWTF. Also, as for the chrome plating facility, several other operations within the plant are allowed to discharge nickel into the wastewater under the Copper Forming and Metal Finishing Point Source Categories.

#### Sites 1-3, 1-4, 1-5, 1-6, 4-2e, 4-4 & 4-5 Explosives "Kill" Sumps

All of Olin's explosives "kill" sumps operate under the same basic principle even though they vary in size and configuration. Explosives contaminated wastewater enters a baffled settling basin where by design, solids will gravity settle to the bottom of the basin. The supernatant will overflow to the Zone 6 WWTF. While the solids remain under water they are non-reactive, therefore a small flow is maintained at all times through the basin. Periodically, the flow to the basin is stopped and the settled solids are chemically rendered non-reactive or "killed". This kill process utilizes steam, caustic and aluminum powder. After the "kill", it has been Olin's procedure to flush the now non-reactive solids into the sewer system for removal at the Zone 6 WWTF. Under the subject reclassification proposal, Olin intends to remove these "killed" solids and transport them to a new dedicated wastewater pre-treatment facility. This pre-treatment facility will consist of an influent wet well, flocculator/clarifier, sludge thickener and sludge dewater by plate and frame press. The effect of this treatment facility will be to duplicate solids removal from this waste stream previously performed at the Zone 6 WWTF. For this reason, no further solids removal would be expected to occur from discharge of this treatment plant's effluent to the Zone 6 WWTF.

We hope the above discussion has provided the information necessary for the Agency to make a judgement on our proposed reclassification. Should any additional information be necessary please feel free to contact this office.

Very truly yours,

A handwritten signature in dark ink, appearing to read "L. W. Maxson", with a stylized flourish at the end.

L. W. Maxson, Director,  
Energy & Environmental Services

/bjv:10/128

RECEIVED

AUG 23 1985

U.S. EPA, REGION V



August 9, 1985

CERTIFIED MAIL

U.S. Environmental Protection Agency  
Region V  
230 S. Dearborn St.  
Chicago, IL 60604

Re: Main Plant Facility EIR

Gentlemen:

Please find enclosed a USGS map (scale: 1 inch to 2000 feet) identifying drinking water withdrawal wells that are located within a three mile radius of Olin Corporation's Zone 6 Emergency Holding Lagoon. This map was inadvertently excluded from Olin's EIR that was sent to you on August 8, 1985.

Very truly yours,

L.W. Maxson, Director  
Energy & Environmental Services

WJG/tec

CERTIFIED MAIL  
cc: Mr. L.W. Eastep  
Permit Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

RECEIVED

AUG 21 1985

SOLID WASTE BRANCH  
U.S. EPA, REGION V

(7)

COPY 2



217/782-6762

Refer to: 1190200002/Madison County  
East Alton/Olin Main Plant

February 28, 1986

Olin Corporation  
Mr. L.W. Maxson  
Director, Energy & Environmental Services  
Shamrock Street  
East Alton, Illinois 62024


Dear Mr. Maxson:

This will acknowledge receipt of your letters, dated December 17, 1985 and January 29, 1986, regarding re-classification of the Zone 6 wastewater treatment facility sludge. Also, thank you for the presentation explaining the proposal given to several members of our Divisions of Land and Water Pollution Control on December 12, 1985.

Based on the information submitted to the Agency, it appears that the Zone 6 sludge may be re-classified upon construction and rerouting of the various listed hazardous waste streams through the proposed Zone 4 wastewater treatment facility, subsequent direct discharge under NPDES pursuant to 35 IAC 721.104(a)(2) from Zone 4, and removal of solids from the various units within 90 days of generation. The treatment units may be reclassified as wastewater treatment units under 35 I.A.C. 720.110 and exempted from permitting requirements under 35 IAC 725.101(c)(10) and 35 IAC 724.101(f)(6). Since the various treatment units have interim status, have stored hazardous waste longer than 90 days, and have been flushed to the Zone 6 wastewater treatment facility, a closure plan under 35 IAC 725 Subpart G for the units currently influent to Zone 6 is required before the reclassification of Zone 6 sludge can take place. The Part 8 application should also be amended to reflect these proposed changes.

Should you have any questions please contact Linda Kissinger at 217/782-6762.

Very truly yours,

  
Lawrence W. Eastep, P.E., Manager  
Permit Section  
Division of Land Pollution Control

LWE:LJK:sf/441f,65

cc: Southern Region  
DWPC - Tim Kluge  
USEPA - Jim Hayka ✓

189-69

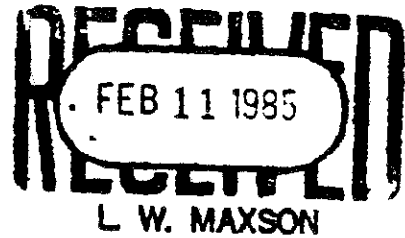


217/782-6761

Refer to: 11902002 -- Madison County  
East Alton/Olin Corporation  
Subpart F Groundwater Monitoring

February 8, 1985

L. W. Maxson  
Olin Corporation  
Shamrock Street  
East Alton, Illinois 62024



Dear Mr. Maxson:

The Agency has received Olin's "Groundwater Sampling and Analysis Plan", revised January, 1985 for the Zone 6 Emergency Holding Lagoon. The revised plan incorporates the Agency's recommendation communicated by letter on September 7, 1984 and appears to meet the requirements of Section 725.192. However, the filtering requirements for radionuclides listed on page seven should be corrected to reflect the procedural changes mentioned in our last correspondence. As required by the above section a copy of this plan must be kept at the facility.

The Agency files indicate that Olin is presently conducting third quarter background sampling for monitoring wells G102-G106. Although background has not been completed, Olin is required to submit groundwater information as part of the annual report in accordance with Section 725.175. This report is due March 1, 1985.

If you have any questions or comments please contact Kenneth W. Liss of my staff at 217/785-2893.

Sincerely,

*Mark A. Haney* DAH

Mark A. Haney, Manager  
Facilities Compliance Unit  
Compliance Monitoring Section  
Division of Land Pollution Control

MAH:KWL:mkb:16/146

cc: Southern Region  
Compliance Correspondence Log (A)  
Division File



EAST ALTON, ILLINOIS 62024

January 25, 1985

CERTIFIED MAIL

RECEIVED  
FEB 4 1985

RCRA Activities  
Part B Permit Application  
U.S. Environmental Protection Agency, Region V  
P.O. Box A3587  
Chicago, IL 60604-3587

Re: Olin Corporation  
Main Plant Facility  
ILD006271696

Gentlemen:

Please find enclosed a revised "Groundwater Sampling and Analysis Plan" for Olin Corporation's Zone 6 Emergency Holding Lagoon at its Main Plant Facility in E. Alton, IL. This Plan has been revised to include several items referred to in a letter from Mr. Dale Helmers of the Illinois EPA, addressed to Olin and dated September 7, 1984 (copy attached).

This Plan is included in Olin's Part B Application as Appendix IX and should replace the original Plan submitted to the U.S. EPA in October, 1984.

If you have any questions, please do not hesitate to contact Olin.

Very truly yours,

L.W. Maxson, Director  
Energy & Environmental Services

WJG/tec

CERTIFIED  
cc: Mr. L.W. Eastep, Manager  
Permit Section, DLPC  
Illinois EPA  
2200 Churchill Road  
Springfield, IL 62706

189-27

COPY 2



EAST ALTON, ILLINOIS 62024

August 24, 1984

CERTIFIED MAIL

Mr. Dale A. Helmers  
Compliance Monitoring Section  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Dear Mr. Helmers:

In accordance with Title 35, Illinois Administrative Code, Part 725, Subpart F, Groundwater Monitoring, herewith are submitted two copies each of the following reports concerning Olin Corporation's Main Plant Facility Zone 6 Emergency Holding Lagoon:

- (1) Hydrogeologic investigation to establish a groundwater monitoring program capable of determining the Lagoon's impact on the quality of groundwater in the uppermost aquifer underlying the Lagoon. (Section 725.190(a))

Prepared by John Mathes & Associates, Inc. Columbia, Il.

- (2) Groundwater quality assessment program outline for the Zone 6 Lagoon (Section 725.193(a))

Prepared by John Mathes & Associates, Inc. Columbia, Il.

- (3) Groundwater sampling and analysis plan for the Zone 6 Lagoon (Section 725.192 (a))

Prepared by Olin Corporation

These reports cover Activity Number 4 shown in the Project Completion Schedule, Attachment II, of the letter sent to you dated June 14, 1984, outlining Olin's proposed scope of work for a groundwater monitoring system for the Zone 6 Emergency Holding Lagoon.

ATTACHMENT 7

Page 1 of 2

RCRA Part B

Main Plant

March, 1986

O L I N C O R P O R A T I

Olin is requesting the Agency to review the three reports and provide a written response for each, stating your approval/disapproval. Based on a positive response from the Agency by September 7, 1984, Olin is prepared to initiate Activity Number 6 of the Project Completion Schedule by September 21, 1984.

If you have any questions regarding the reports or this letter, please contact M. F. Redington at (618) 258-3394.

Very truly yours,



L. W. Maxson, Director  
Energy & Environmental Services

Enclosures (3)

WJG/jso

cc: Mr. Perry Mann  
IEPA - Collinsville  
(cover letter only)

bcc: ~~L. H. Brookshier~~ *MA*  
~~M. F. Redington~~  
~~W. J. Galler~~



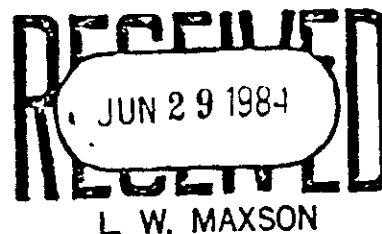


217/785-5733

Refer to: 11902002 -- Madison County  
East Alton/Olin Corporation  
Subpart F, Groundwater Monitoring

June 27, 1984

L. W. Maxson  
Olin Corporation  
Shamrock Street  
East Alton, Illinois 62024



Dear Mr. Maxson:

This letter is in reference to your proposal titled "Hydrogeologic Investigations and Monitoring Well Installation at Olin's Zone 6 Emergency Holding Lagoon". I have completed my review of your proposal and have the following comments.

1. The proposal states that the wells will have screens 10 feet in length and centered at the potentiometric surface. It may be to your advantage to place the entire screened portion below the potentiometric surface. This is a precautionary measure to ensure the well's monitoring capability if the potentiometric surface should drop.
2. A sampling and analysis plan developed to meet Section 725.192(a) should be submitted with the final report.
3. A groundwater quality assessment program outline developed to meet Section 725.193(a) should be submitted with your final report.
4. Even if the final report calls for additional monitor wells, the well installed during this program should be sampled as outlined in the Project Completion Schedule. The selection of wells to be sampled may be limited to only those which will be utilized in a final monitoring program.

Providing that the requirements in comments 2, 3, and 4 are met, it appears that your proposed monitoring plan would meet the requirements of Subpart F. If you have any questions please contact me.

Sincerely,

*Dale A. Helmers*

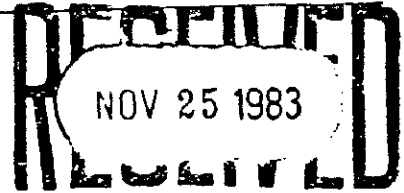
Dale A. Helmers  
Compliance Monitoring Section  
Division of Land Pollution Control

DAH:mks:16/6

cc: Division File  
Region  
Compliance Correspondence Log

ATTACHMENT 6  
Page 1 of 1  
RCRA Part B  
Main Plant  
March, 1986

217/782-6761



Refer to: 11902002 -- Madison County  
East Alton/Olin Corporation  
Subpart F Groundwater Monitoring

November 22, 1983

CERTIFIED # 155031

Olin Corporation  
Shamrock Street  
East Alton, Illinois 62024

Attention: Mike Redington

Dear Mr. Redington:

This letter is to inform you that the above facility is in apparent violation of Title 35, Illinois Administrative Code, Part 725, Subpart F, Groundwater Monitoring. The following apparent violations have been identified based upon the September 19, 1983 inspection by IEPA representative Perry Mann:

Section 725.190(a). A groundwater monitoring program capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility was not implemented by November 19, 1981.

Section 725.190(b). A groundwater monitoring system which meets the requirements of 725.191 has not been installed, operated or maintained, nor have the requirements of 725.192 - 725.194 been complied with.

You are hereby requested to provide information to this office within 15 working days of the date of this letter, informing the Agency of action taken or to be taken to correct these apparent violations and/or to prevent future occurrences. Such documentation should include a time frame for bringing your facility into compliance with part 725, Subpart F regulations. Please address documentation to:

Illinois Environmental Protection Agency  
Division of Land Pollution Control  
2200 Churchill Road  
Springfield, Illinois 62706

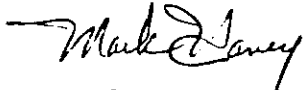
Attention: Mark Haney, Manager  
Compliance Sub-Unit

ATTACHMENT 4  
Page 1 of 2  
RCRA Part B  
Main Plant  
March, 1986

Page 2.

If you have any questions regarding these matters, you may contact me at 217/785-3912.

Sincerely,



Mark A. Haney, Manager  
Compliance Sub-Unit  
Compliance Monitoring Section  
Division of Land Pollution Control

MAH:tk:16/54

cc: Division File  
Southern Region  
Mike Nechvatal  
Greg Zak  
Cheryl Putting (A)



EAST ALTON, ILLINOIS 62024

2615-8  
JR

June 14, 1984

Mr. Dale Helmers  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Dear Mr. Helmers:

The purpose of this letter is to submit, for Illinois EPA Approval, Olin's proposal for Hydrogeologic Investigations and Monitoring Well Installation at Olin's Zone 6 Emergency Holding Lagoon. Specifically, Olin seeks agreement from the Illinois EPA that the proposed scope of work will meet the Agency's requirements for the establishment of a groundwater monitoring system which will comply with Title 35, Illinois Administrative Code, Part 725, Subpart F, Groundwater Monitoring.

Olin's proposed scope of work is outlined in Attachment I which is a report from John Mathes and Associates titled "Study of Scope and Costs For Hydrogeologic Investigations and Monitoring Well Installation - Zone 6, Emergency Overflow Lagoon". As stated in the report, the proposed scope of work was developed in consultation with the Collinsville Regional Office of IEPA and reflects the Agency's requirements as understood by John Mathes and Associates.

Attachment II is a Project Completion Schedule for establishing a groundwater monitoring system and collecting and analyzing the first set of samples. The drilling start date is, of course, dependent on Olin's receipt of a timely response from the Illinois EPA regarding the proposed scope of work and resolution of any changes in scope which may be necessary as a result of the Agency's review.

If you have any questions regarding this submittal, please contact M.F. Redington at (618) 258-3394.

Very truly yours,

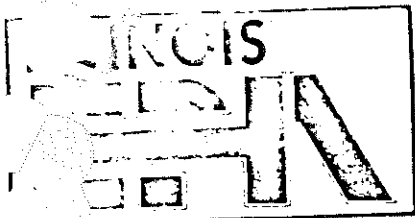
L.W. Maxson, Director,  
Energy & Environmental Services

MFR/tec

cc: Mr. Perry Mann  
IEPA - Collinsville

bcc: L.H. Brookshier  
M.F. Redington

ATTACHMENT 5  
Page 1 of 1  
RCRA Part B  
Main Plant  
March, 1986



# Environmental Protection Agency

117 W. Main Street Collinsville, IL. 62234

618/345-4606

CERTIFIED MAIL  
#128831

Refer to: LPC 11902002 - Madison County - East Alton/Olin  
ILD006271696  
Compliance Inquiry Letter

November 10, 1983

Olin Corporation  
Shamrock Street  
East Alton, Illinois 62024

Attn: Mike Redington

Dear Mr. Redington:

Your hazardous waste management facility was visited on September 19, 1983 by Perry Mann, representing this Agency, in order to conduct an inspection to determine compliance with respect to Title 35: Illinois Administrative Code, Subtitle G, Subpart F: Ground Water Monitoring.

It has been determined that your emergency hazardous waste storage impoundment meets the applicability requirements under Section 725.90 of said Subpart and must comply with the requirements and standards thereunder. The subject inspection disclosed the following apparent violations of rules and regulations:

Class I

725.190 (all parts therein) - Failure to implement a ground water monitoring program capable of determining the facility's impact on the quality of ground water in the uppermost aquifer underlying the facility.

725.191 (all parts therein) - Failure to implement a ground water monitoring system.

725.192 (all parts therein) - Failure to implement a sampling analyses plan with respect to the ground water monitoring system.

725.193 (all parts therein) - Failure to prepare an outline of a ground water quality assessment program.

725.194 (all parts therein) - Failure to implement a recordkeeping and reporting plan with respect to the ground water monitoring program.

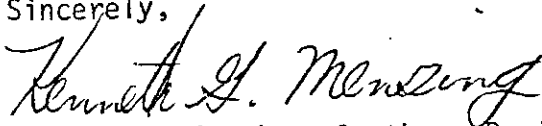
ATTACHMENT 3  
Page 1 of 2  
RCRA Part B  
Main Plant  
March, 1986

November 10, 1983

Please submit in writing, within ten (10) days of receipt of this letter, the reasons for the apparent violations outlined above, as well as a description of the steps you have instituted to prevent any further recurrence of the apparent violations cited from the subject inspection. The written response should be sent to the address of this office, given above.

Further, take notice that non-compliance with the Illinois Environmental Protection Act or Rules and Regulations adopted thereunder may result in Enforcement action pursuant to Title VIII of the Illinois Environmental Protection Act, Ch. 111 1/2, Ill. Rev. Stat., Sec. 1001 et.seq.

Sincerely,



Kenneth G. Mensing, Southern Region Manager  
Land Field Operations Section  
Division of Land Pollution Control

PCM:jlr

Enclosures: Subpart F  
Inspection Report  
Subtitle G Regulations

cc: Division File  
Southern Region  
Mark Haney  
Monte Nienkerk  
Phil Van Ness

November 10, 1983

Division File

Perry C. Mann *PCM*

LPC 11902002 - Madison County - East Alton/Olin  
ILD006271696 - Subpart F Inspection dated September 19, 1983

An inspection to determine compliance with the Subpart F: Ground Water Monitoring Requirements was conducted on September 19, 1983. Mr. Mike Redington and Mr. Wayne Galler, representing Olin Corporation, were contacted.

It was determined that no ground water monitoring program has been developed for the surface impoundment, which has a one million gallon capacity. The subject impoundment is utilized as an emergency storage area for corrosive liquids (D002), which upon such emergencies, are bypassed from the neutralization facility into the subject impoundment. Because of the circumstances surrounding the use of this impoundment, Olin has petitioned the USEPA for the delisting of the wastewater this impoundment receives. Attached is a letter from Olin, dated November 4, 1983, in response to inquires regarding the status of their petition. In the letter, Olin indicates that the review of their petition had been completed and "written up for approval", however, because of some contemporary pending legislation, the USEPA had indicated that "no new petitions are being approved". Verification of this has been unobtainable despite numerous unsuccessful attempts to contact a William Sproat, USEPA, who is responsible for petition review.

Nevertheless, the requirements under 725.190-194 Subtitle G: Waste Disposal Regulations are in fact applicable to the subject surface impoundment. As stated previously, no program has been developed as of the inspection date. A ground water monitoring program, developed in compliance with 725.190-194 and the established guidelines as described in Ground Water Monitoring Guidance of Owners and Operators of Interim Status Facilities, USEPA; SW-963: Revised March 1983, is necessary for immediate development and implementation.

PCM:jlr

cc: Southern Region  
Olin Corporation ✓  
Mark Haney  
Monte Nienkerk  
Phil Van Ness

ATTACHMENT 2  
Page 1 of 1  
RCRA Part B  
Main Plant  
March, 1986



# Environmental Protection Agency

117 W. Main Street Collinsville, IL. 62234

618/345-4606

Refer to: LPC 11902002 - Madison County - East Alton/Olin  
ILD006271696

September 14, 1983

Olin Corporation  
Shamrock Street  
East Alton, Illinois 62024

Attn: Wayne Galler

Dear Mr. Galler:

Pursuant to Title 35: Illinois Administrative Code, Subtitle G, Subpart F, it has been determined that your emergency hazardous waste storage impoundment meets the applicability requirements under Section 725.90 of said Subpart and must comply with the requirements and standards thereunder. These rules require a comprehensive ground water monitoring program, and detailed record keeping and reporting at all facilities which manage hazardous waste in a surface impoundment, landfill, or land treatment facility.

By this letter, I am giving notice that an inspection of the subject requirements will be conducted within two weeks by a representative of this Agency. All pertinent data and information necessary for conducting the inspection should be available for review.

Enclosed is a sample inspection checklist, with those sections applicable to your facility, which will be utilized for the inspection. Please forward this to your staff or representative responsible for the maintenance of any pertinent information.

If you or your representative have any questions or the desire to schedule a specific meeting date for the inspection, please contact Perry Mann at this office as soon as possible. Your cooperation in these matters will be appreciated.

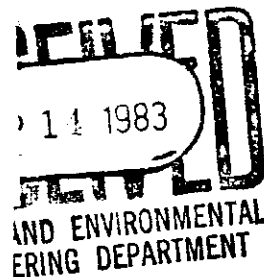
Sincerely,

Kenneth G. Mensing, Southern Region Manager  
Land Field Operations Section  
Division of Land Pollution Control

PCM:jlr

Enclosure: Subpart F Inspection Example  
Subpart F Guidelines

cc: Division File  
Southern Region  
Mark Haney  
Monte Nienkerk



ATTACHMENT 1  
Page 1 of 1  
RCRA Part B  
Main Plant  
March, 1986





427 N. SHAMROCK STREET  
EAST ALTON, ILLINOIS 62024-1174

December 15, 1992

**CERTIFIED MAIL**

Mr. Chris N. Cahnovsky  
Environmental Protection Specialist  
Division of Land Pollution Control  
Illinois Environmental Protection Agency  
2009 Mall Street  
Collinsville, IL 62234

Re: Extension for Storage of Mercury Contaminated Debris  
Olin Corporation  
Main Plant Facility  
IEPA No. 1190200002  
USEPA No. ILD006271696

Dear Mr. Cahnovsky:

As requested, Olin Corporation is submitting this letter to document storage of "Mercury Contaminated Debris", a hazardous waste for over one year. Olin has a Part B Permit for storage of this waste. 35 IAC Section 728.150 "Prohibitions On Storage" limits storage to one year unless accumulating quantities necessary to facilitate proper recovery, treatment, or disposal.

Mercury Contaminated Debris consists primarily of rags and gloves generated during government required mercury testing of military ammunition. The debris is a hazardous waste due to lead and mercury content and carries the EPA Waste Codes of D008 and D009. Due to the national capacity variance for mercury retorting and the generic case-by-case extension for contaminated debris (57 FR 20766), Olin believes this waste is exempt from the one year limit on storage as per 35 IAC Section 728.150 (d).

Disposal of the waste has been delayed to test a variety of treatment and reclamation techniques to avoid land disposal. To date, retorting to recover mercury and washing with a variety of cleaners and stabilizers have been attempted with an increasing level of success. Also, the amount of waste produced has been decreased through source reduction changes in the ammunition testing procedures and lab equipment.

If you have any questions, please contact Mr. Lou Pattan at (618) 258-5728.

Very truly yours,

  
For: M. L. Roark, Manager  
Environmental Affairs

RECEIVED  
IEPA

DEC 17 1992

COLLINSVILLE OFFICE